

In the Drawings:

Please amend Figs. 2 and 4 as shown in red ink and attached herewith under separate cover together with the Letter to the Chief Draftsman.

Four sheets of formal drawings, corresponding to a complete replacement set of Figs. 1 - 5, are also attached herewith under separate cover.

REMARKS

Reconsideration of the above identified application in view of this Amendment is respectfully requested. This Amendment is in response to the Office Action dated June 2, 2005.

By said Office Action, the Examiner stated the following detailed action items:

- Item 1: Claims 1-42 and 46-79 were examined.
- Item 2: The drawings, in particular, with respect to Figs. 1 - 4, were objected to because of inconsistency in the representation of the objects.
- Item 3: "Item F" in Fig. 4 is not addressed in the specification.
- Item 4: Corrected drawing sheets are required.
- Item 5: The disclosure was objected to because of inconsistency in addressing entities of the invention.
- Item 6: Request for Applicants to check and address similar inconsistencies in the specification.
- Items 7 - 8: Claims 42 and 79 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement.
- Item 9: claims 1-79 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention.
- Items 10 - 22: Details of rejection of specific claims, regarding Examiner Item 9.
- Item 23: Claims 12-15, 17, 25-29, 33-36, 38-41, 48-53, 55-60, 64-68, 71, 73, 75, and 79, were rejected by virtue of their dependence (upon claims rejected by Examiner Item 9, in general, and Examiner Items 10 - 22, in particular).
- Item 24: Claims 1-3, 10-15, 17, 25-27, 29, 33, 35-36, 39-42, 46-48, 55-56, 58-60, 64-66, 68, 71, 73, and 76-78, were rejected under 35 U.S.C. §102(e) as being anticipated by Boyle et al. (U.S. Patent No. 6,138,158).
- Items 25 - 27: Details of rejection of specific claims, regarding Examiner Item 24.
- Item 28: Claims 4-9, 16, 18-24, 28, 30-32, 34, 38, 49-55, 61-63, 67, 69-70, 72, 75, and 79, were rejected under 35 U.S.C. §103(a) as being unpatentable over Boyle et al. (U.S. Patent No. 6,138,158).
- Items 29 - 38: Details of rejection of specific claims, regarding Examiner Item 28.
- Items 39 - 40: Claims 37 and 74 were rejected under 35 U.S.C. §103(a) as being unpatentable over Boyle et al. (U.S. Patent No. 6,138,158) in view of Huang (U.S. Patent No. 6,192,361).

By this Amendment, the specification has been amended.

Figs. 2 and 4 have been amended. A replacement set of Figs. 1-5 are included with this Amendment.

Summary of the status of the claims resulting by this Amendment

Apparatus independent claim 1, and claims 2-13, 15, 16, 18-38, and 40-42, depending therefrom, have been currently amended.

Apparatus dependent claims 14 and 17 remain in original form.

Apparatus dependent claim 39 has been cancelled.

Device independent claim 43, and claims 44 and 45, depending therefrom, have been (previously) withdrawn.

Method independent claim 46, and claims 47-58, 60-75, and 77-79, depending therefrom, have been currently amended.

Method dependent claim 59 remains in original form.

Method dependent claim 76 has been cancelled.

Details of the above indicated amendments of the specification, figures, and claims, follow hereinbelow.

Briefly, the present invention relates to an apparatus and method for authentication of a user. The authentication apparatus comprises [according to (currently amended) apparatus independent claim 1]: a communicator, for communicating, via an authenticatable link, with an authenticatable mobile device, for providing authentication of the authenticatable mobile device; an associator, operatively connected to the communicator, and operatively connected through an insecure or non-authenticated link to a non-authenticated device, for associating the authentication with an activity request; and an authentication communicator, operatively connected to the associator, for indicating that the activity request is approved. The authentication method comprises [according to (currently amended) method independent claim 46]: communicating, by a communicator, via an authenticatable link, with an authenticatable mobile device, for providing authentication of the authenticatable mobile device; associating the authentication with an activity request, by an associator operative with the communicator, and operative through an insecure or non-authenticated link with a non-authenticated device; and indicating that the activity request is approved, by an authentication communicator operative with the associator.

For achieving the objectives of providing order, consistency, and clarity, to the details of the present Applicants' Response to the Examiner's Office Action, the order and format of Applicant's Response are based on, and consistent with, those of the Examiner's detailed action Items 2-40, inclusive, originally stated in the Examiner's Office Action, and summarized hereinabove. Thus, Applicants' Response to each of the Examiner's detailed action Items 2-40, is as follows:

Item 2:

In Fig. 1, original reference number "24", identifying the "Fail Ctr." (fail counter or failure counter), remains unchanged. In Fig. 2, original reference number "24", identifying the "GSM device", has been amended to "25", as indicated in the annotated marked-up and replacement sets of the drawings.

For maintaining consistency with the just stated amendment of Fig. 2 in the drawings, therefore, in the specification, the paragraph beginning at page 13, line 18, and ending at page 14, line 2, has been replaced, as indicated hereinabove. Therein, original reference number "24" identifying the "GSM device" appears once, and has been amended to "25". In the entire remainder of the specification, there is no additional appearance of original reference number "24" identifying the "GSM device", and thus, no additional amendment regarding such is needed.

In Fig. 3, original reference number "30", of the "memory unit", remains unchanged. In Fig. 4, original reference number "30", identifying the "PDA", has been amended to "31", as indicated in the annotated marked-up and replacements sets of the drawings.

For maintaining consistency with the just stated amendment of Fig. 4 in the drawings, therefore, in the specification, the paragraph beginning at page 19, line 18, and ending at page 20, line 23, has been replaced, as indicated hereinabove. Therein, original reference number "30" identifying the "PDA" appears twice, and in each appearance, has been amended to "31". Additionally, in the specification, the paragraph beginning at page 22, line 20, and ending at page 22, line 22, has been replaced, as indicated hereinabove. Therein, original reference number "30" identifying the "PDA" appears once, and has been amended to "31". In the entire remainder of the specification, there is no additional appearance of original reference number "30" identifying the "PDA", and thus, no additional amendment regarding such is needed.

In Fig. 4, the typographically incorrect original reference number "4", identifying the "MSC" (message service center), has been amended to "40", as indicated in the

annotated marked-up and replacements sets of the drawings, in order to be consistent with the specification, wherein, on p. 20, line 11, the correct reference number "40" appears for identifying the "MSC".

In the above described amendments, no new matter has been added to the drawings or to the specification.

Thus, the Applicant believes the preceding amendments of Figs. 2 and 4 in the drawings, and to the specification, completely overcome Examiner's Item 2 objections to the drawings.

Item 3:

In Fig. 4, the boxed-in term "Item F"; the terms "Internet, Cellular Core, etc.", and the reference lines and symbols associated therewith, have been cancelled, as indicated in the marked-up and replacements sets of the drawings.

Thus, the Applicant believes the preceding amendments of Fig. 4 in the drawings completely overcomes Examiner's Item 3 objections to the drawings.

Item 4:

Two annotated marked-up drawing sheets of Figs. 2 and 3, and 4, are included in this Amendment. Additionally, four sheets of formal drawings, corresponding to a complete replacement set of Figs. 1 - 5, are included in this Amendment. The above have also been sent under separate cover to the Chief Draftsman.

Item 5:

On p. 13, lines 4, 5, and 11, each appearance of the original reference number "23", identifying the "authentication communicator", is correct, and consistent with the appearance of the same in the embodiment of the invention illustrated in Fig. 1.

On p. 15, line 4, the typographically incorrect original reference number "23", identifying the "timer", has been amended to "21", as indicated in the hereinabove replacement paragraph beginning at page 14, line 19, and ending at page 15, line 8, in order to be consistent with appearance of the "Timer 21" shown in Fig. 1.

Thus, Applicants believe the preceding amendments of the specification completely overcome Examiner's Item 5 objections to the specification.

Item 6:

Applicants have checked the specification, and identified one additional similar inconsistency regarding reference numbers of apparatus components or entities.

On p. 23, line 21, the typographically incorrect original reference number "22", identifying the "network server", has been amended to "18", as indicated in the

hereinabove replacement paragraph (sentence) beginning at page 23, line 21, and ending at page 23, line 21, in order to be consistent with appearance of the "Server 18" shown in Fig. 1.

As a separate amendment of the specification, on p. 7, line 5, the incorrectly spelled word "Aternatively" has been amended to the correctly spelled word "Alternatively", as indicated in the hereinabove replacement paragraph beginning at page 7, line 5, and ending at page 7, line 8.

Applicants' Note:

Before proceeding with the remaining details of the Applicants' response to each of the above listed Examiner's Items of the Office Action, Applicants respectfully point out that throughout the entire specification (including the claims) of the present invention, including, for example, in the hereinbelow copied sections of text from the original specification, several words or terms, and their respective grammatically related forms, and therefore, phrases including such words or terms, are synonymously and equivalently used, and have the exact same meaning in the indicated text. For the objective of providing as clear and understandable Response as possible, as part of this Response, the Applicant shows such synonymous and equivalent use by *italicizing* and parenthesizing the correspondingly synonymous or equivalent words, terms, or phrases, and placing them immediately following the originally written words, terms, or phrases, appearing in the copied sections of text from the original specification.

Items 7 - 8:

Applicants respectfully point out that in the original specification, in the hereinbelow sections of text copied from the original specification, in the illustrative description of the subject matter recited in claims 42 and 79, the phrases "for indicating", "to communicate", and "is output", and their respective grammatically related forms, are synonymously and equivalently used, and have the exact same meaning. Additionally, in particular, therein, the terms "approved" and "authenticated", and their respective grammatically related forms, are synonymously and equivalently, and have the exact same meaning.

As a reference to Applicants' response to Examiner's Items 7 - 8, Applicants also point out that in the specification, literal basis of the recitations of (original) apparatus claim 42 and method claim 79, in particular, each including the same phrase "by applying a change to a routing table on a router", is provided as follows:

> In the 'Summary of the Invention' section, on p. 5, lines 18 - 19, wherein it is stated:

"The associator is preferably connected to an authentication communicator for indicating (*to communicate / for outputting*) that said activity request is approved (*authenticated*)".

Further therein, on p. 6, lines 1 - 5, wherein it is stated:

"Preferably, said authentication communicator is operable to communicate (*for indicating / to output*) said authentication (*approval*) by applying a change to a routing table on a router, or to instruct another entity to apply such change, or to approve another entity to apply such a change, or to instruct another entity to prevent such a change, or to directly prevent such a change."

> Further therein, on p. 8, lines 20 - 21, wherein it is stated:

"Preferably, said indication is output (*indicated / communicated*) by applying a change to a routing table on a router".

> In the 'Description of the Preferred Embodiments' section, when describing embodiments of the present invention illustrated in Fig. 1, on p. 13, lines 3 - 5, wherein it is stated:

"The associator 16 is preferably connected to an authentication communicator 23 for indicating (*to communicate / for outputting*) to the server 18 that a given activity request is approved".

> Further therein, on p. 13, lines 10 - 12, wherein it is stated:

"In a further embodiment, the authentication communicator 23 may communicate (*indicate / output*) the authentication (*approval*) by applying a change to a routing table on a router".

The recitations of claims 42 and 79 clearly correspond to, and are understood as meaning, one of several alternative particular manners or ways whereby "... the authentication communicator may communicate (*indicate / output*) the authentication (*approval*) to any device or network node responsible for managing the activity which is the subject of the request", as stated within the above indicated 'Description of the Preferred Embodiments' section.

Thus, from the above, it is readily seen that literal basis and essential meaning of the recitations of claims 42 and 79, in particular, each including the same phrase "by applying a change to a routing table on a router", are fully and clearly provided in the specification.

More specifically, based on the illustrative description of the present invention, in particular, with reference to Fig. 1, from p. 11, line 8, through p. 13, line 12, and, specifically, therein, on p. 12, lines 1 - 6, wherein the "associator 16" is introduced and defined, and therein, on p. 13, lines 3 - 12, wherein the "authentication communicator 23" as well as the operative relationship between the "associator 16" and the "authentication communicator 23", are introduced and defined, in relation to the (approved) "activity request", it is clearly understood therefrom, that an exemplary "device or network node responsible for managing the activity which is the subject of the request" corresponds to "the server 18", or, "an external proxy server or gateway", or, "a router".

In the last exemplary particular embodiment, i.e., including "a router", it is clearly understood that "In a further embodiment, the authentication communicator 23 may communicate (*indicate / output*) the authentication (*approval*) [to a router] by applying a change to a routing table on a [the] router". In other words, "the authentication (*approval*)" is communicated (*indicated / output*) from the authentication communicator 23 to a router, by manner or way of the communication / indication / output causing, involving, or/and resulting in "applying a change to a routing table on a router".

Applicants respectfully submit that a communication / indication / output of an "authentication (*approval*)" communicated (*indicated / output*) from a first device, for example, "the authentication communicator 23" as embodied and exemplified by the present invention, to a second device, for example, "a router" as embodied by the present invention, by manner or way of the communication / indication / output causing, involving, or/and resulting in "applying a change to a routing table on a router" is well known to one of ordinary skill in the art.

Moreover, Applicants firmly contend that additional descriptive details of a manner or way of a communication / indication / output causing, involving, or/and resulting in "applying a change to a routing table on a router", being well known to one of ordinary skill in the art, are not needed for properly describing and understanding implementation of the above indicated aspects, embodiments, and examples, of the present invention, and are not needed for properly understanding the recitations of (original) claims 42 and 79, thereof, and therefore, are sufficiently clear and concise as to enable any person skilled in the art to which the present invention pertains, or with which it is most nearly connected, to make and use (operate, implement) the same'.

Nevertheless, in view of the preceding discussion and clarification of the subject matter recited in (original) claims 42 and 79, and based on hereinabove shown, and

hereinbelow described, amendments of independent apparatus claim 1 and method claim 46, respectively, and, in order to be fully and literally consistent with, and have proper antecedent basis from, amended independent apparatus claim 1 and method claim 46, therefore, claims 42 and 79, respectively, were amended, as shown hereinabove.

Applicants believe the preceding discussion and clarification, and current amendments of claims 42 and 79, completely overcome Examiner's Items 7-8, 35 U.S.C. §112, first paragraph, rejections of said claims.

Item 9:

By this Amendment, Applicants have amended apparatus independent claim 1, and claims 2-13, 15, 16, 18-38, and 40-42, depending therefrom, and has amended method independent claim 46, and claims 47-58, 60-75, and 77-79, depending therefrom. Apparatus dependent claims 14 and 17 remain in (original) form. Apparatus dependent claim 39 has been cancelled. Device independent claim 43, and claim 44-45, depending therefrom, have been withdrawn. Method dependent claim 59 remains in (original) form. Method dependent claim 76 has been cancelled.

By this Amendment, in apparatus independent claim 1, and in claims 20-22, 24, 33-36, 38, and 40, depending therefrom, and, in method independent claim 46, and in claims 61, 63, 72-73, 75, and 77, depending therefrom, the term "non-authenticatable" (or "non-authenticable") in its present (not necessarily clearest and most concise) 'grammatical' form in the phrase "non-authenticatable device" (or "non-authenticable device"), has been amended to the (clearer and more concise) 'grammatical' form of "non-authenticated", such that the amended phrase recites "non-authenticated device". Method dependent claim 71 has been similarly amended, wherein the phrase "non-authenticatable device" has been amended to recite "insecure or non-authenticated link".

By this Amendment, (original) claims 2-9, 15, 16, 18, 19, 31, 32, 36, 47-54, 70, 73, each including one or more acronym or/and trademark/trade name, were amended by adding the spelled out full name of the acronym, or by adding the spelled out full 'generic technical name' associated with the acronym or the trademark/trade name, in parentheses immediately following the first appearance of each acronym or trademark/trade name. The Applicant contends that each acronym or trademark/trade name, and the corresponding spelled out full name or 'generic technical name' thereof, are well known, taught about, and used, in the field and art of the present invention.

By this Amendment, Applicant have cancelled apparatus dependent claim 39 and method dependent claim 76, since the limitations of these dependent claims now appear in (currently amended) apparatus and method independent claims 1 and 46, respectively.

All amendments of the preceding indicated claims are clearly seen in the hereinabove provided marked or edited set of amended claims, shortly after the beginning of this Amendment.

The above indicated claims were amended in order to provide clarity, definiteness, consistency, to the claims, and to 'particularly point out and distinctly claim the subject matter which applicants regard as their invention'. For accomplishing this, the above indicated claims were amended by removing non-clarities, indefiniteness, inconsistencies, misunderstandings, and ambiguities, of the originally claimed subject matter, in order to provide clarity, definiteness, consistency, understanding, and non-ambiguity, of the currently amended claimed subject matter.

The above indicated claims were amended by strictly relying upon the specification of the originally disclosed invention, without adding new subject matter. Words, phrases, and terms used for amending the claims are directly and literally obtained from, and supported by, the specification of the originally disclosed invention, and are not obtained from, or supported by, hints, suggestions, and/or creative deductions, drawn from the specification of the originally disclosed invention.

Independent claims 1 and 46, reading upon the apparatus and method, respectively, of the present invention, were amended to be totally consistent with, and complementary to, each other. Dependent claims therefrom were similarly amended. Moreover, dependent claims were amended to be totally consistent with the corresponding base independent claim, thereby maintaining proper and full antecedent basis in each dependent claim.

Support for each and every one of the above indicated amendments is literally and clearly found in the original specification of the disclosed invention, particularly, in the 'Description of the Preferred Embodiments' section, from pages 10 to 24, inclusive, along with reference to Figs. 1-5.

Specifically, regarding (currently amended) apparatus and method independent claims 1 and 46, respectively, language used for reciting general structure (configuration) and function (operation) of the components in (currently amended) apparatus independent claim 1, and for reciting general manner or way of performing the steps or procedures in (currently amended) method independent claim 46, are particularly found in several

portions of text throughout the entire 'Description of the Preferred Embodiments' section, along with reference to Figs. 1 - 5.

More specifically, language used for reciting general structure (configuration) and function (operation) of the apparatus component, a "**communicator**", and the relationship with an "authenticatable link" and an "authenticatable mobile device", and, language used for reciting general manner or way of performing the method steps or procedures of "**communicating**" and "**authenticating**" using those apparatus components, in (currently amended) apparatus and method independent claims 1 and 46, are literally and clearly found therein.

> For example, on p. 11, lines 10 - 23, wherein it is stated:

"In Fig. 1, there is shown a communicator 10, typically part of a cellular Internet portal including an SMS portal. Optionally this Internet portal may include a WAP portal, in addition to or instead of the SMS portal. The communicator is able to communicate with a first personalized (*authenticatable mobile*) device 12 via an authenticatable link 14 such as a GSM or CDMA link as well as any extension thereof (GPRS, UMTS, etc.). GSM etc, links provide not only authentication but also encryption, which is preferred but is not a requirement of the present invention. A basic embodiment requires only authentication and non-repudiation of the transmission".

"The communication preferably takes advantage of user authentication, which is a feature of GSM or CDMA. Additional authentication can be provided by a (*authenticatable*) link 14 and the (*authenticatable mobile*) device 12, ...".
Additionally, for example, on p. 12, lines 13 - 22, wherein it is stated:

"Generally, mobile telephone devices are authenticatable personalized devices, and by requiring an extra leg of the communication via a mobile telephone link, a provider can determine that a request is genuine". . . . "As will be explained below, the authenticatable link leg of the communication may precede or follow the non-authenticatable (*insecure or non-authenticated*) leg, as long as the two legs can be successfully associated, and a non-exhaustive list of alternative procedures is described hereinbelow".

> Additionally, for example, with reference to Fig. 2, from p. 13, line 18, to p. 14, line 2, wherein it is stated:

"Reference is now made to Fig. 2, which is a simplified diagram showing a GSM device 24 (*herein, amended to read 25*) such as a mobile telephone

(*authenticatable mobile device*). The GSM device comprises a SIM which consists of one or more integrated circuits where at least one of those contains personalized data that supports authentication, encryption and decryption for the secure (*authenticatable*) link 14. The SIM both identifies the mobile telephone and makes it impossible for other devices to impersonate that telephone, thus providing authentication and secure access to a charge account corresponding to the respective mobile telephone (*authenticatable mobile device*) user".

> Additionally, for example, on p. 21, lines 1 - 7, wherein it is stated:

"Reference is now made to Fig. 5, which is a simplified flow chart showing verification of a non-authenticatable channel via an authenticatable channel (*link*) according to an embodiment of the present invention. In Fig. 5, authenticating the link comprises steps of communicating via an authenticatable link with an authenticatable device, verifying, using the authentication procedures of the link, that the communication is with an intended mobile device, . . .".

More specifically, language used for reciting general structure (configuration) and function (operation) of the apparatus component, an "**associator**", and the relationship with the "communicator", "an insecure or non-authenticated link", a "non-authenticated device", and "an activity request", and, language used for reciting general manner or way of performing the method step or procedure of "**associating**" using those apparatus components, in (currently amended) apparatus and method independent claims 1 and 46, are literally and clearly found therein.

> For example, on p. 12, lines 2 - 6, wherein it is stated:

"In addition there is provided an associator 16, which is able to carry out the positive identification of the first personalized (*authenticatable mobile*) device 12 and to associate the authentication with a separate activity or request for activity received by a server 18 or like device through an non-authenticatable (insecure or non-authenticated) link 20 from a requesting (*non-authenticated*) device 22".

> Additionally, for example, on p. 12, lines 12 - 22, wherein it is stated:

"The mechanism of Fig. 1 thus solves the problem of the insecure link by requiring an extra leg of communication via an authenticable link. Generally, mobile telephone devices are authenticable personalized devices, and by requiring an extra leg of the communication via a mobile telephone (*authenticatable*) link, a provider can determine that a request is genuine. In addition, the mobile telephone is associated with a charging account, and provision is made to allow for billing to

be directed to the customer thus identified (*authenticated*). As will be explained below, the authenticatable link leg of the communication may precede or follow the non-authenticatable (*insecure or non-authenticated*) leg, as long as the two legs can be successfully associated, and a non-exhaustive list of alternative procedures is described hereinbelow".

> Additionally, for example, from p. 14, line 19, to p. 15, line 5, wherein it is stated:

"During the log-in process it (*the non-authenticated device*) identifies its secure link, for example by giving an associated mobile telephone number. The identification may be retrieved from storage or entered manually by the user. The associator 16 receives the identification (e.g. mobile telephone number). It (*the associator*) may need to translate the received identification into a different identification appropriate to the communicator 10, and the translation may be carried out by the associator 16 itself or through external translation services, for example by accessing a home location register (HLR). The associator 16 then uses the communicator 10 to contact the mobile telephone in any appropriate way. A timer 23 is operated, giving the owner of the mobile telephone a fixed time to reply and confirm the identity of the user".

> Additionally, for example, on p. 15, lines 9 - 18, wherein it is stated:

"In an alternative embodiment the operation is initiated both at the non-authenticatable device 22, which makes contact with the server 18 and at the personalized (*authenticatable mobile*) device 12, which makes contact with the communicator 10. The associator 16 makes a link between the two communications, and the service to the non-authenticatable (*non-authenticated*) device is authorized. One way of assuring that the authorization by the user was not inadvertent is to provide a password in the reply to the authenticatable device 12. The password is then entered by the user at the non-authenticatable (*non-authenticated*) device 22, thus making clear that the user of the non-authenticatable (*non-authenticated*) device 22 is the same as the user of the authenticatable device and that this action is intentional".

> Additionally, for example, on p. 19, lines 4 - 11, wherein it is stated:

"As discussed above, the communicator preferably obtains a telephone number, in either plaintext, or as an encoded or enciphered version of the telephone number from the non-authenticatable (*non-authenticated*) device. The number is

preferably used for establishing a communication with the secure (authenticatable) mobile device. However, in those embodiments in which communication is initiated from the secure (*authenticatable*) mobile device, the telephone number is preferably used to associate the secured (*authenticatable*) and non-authenticatable (*insecure or non-authenticated*) links that have already been established".

> Additionally, for example, p. 21, lines 3 - 16, wherein it is stated:

"In Fig. 5, authenticating the link comprises steps of communicating via an authenticatable link with an authenticatable (*mobile*) device, verifying, using the authentication procedures of the link, that the communication is with an intended (*authenticatable*) mobile device, setting up a second link via a non-authenticatable (*insecure or non-authenticated*) second channel or link. A stage follows of binding or associating the verification (*authentication*) with an activity request via a non-authenticatable (*non-authenticated*) device. Once the two channels or links have been bound (*associated*) then the authentication on the one link may be used to allow the request on the other link, as explained above, thereby to permit the activity request of the non-authenticatable (*non-authenticated*) device. The step of binding (*associating*) may be carried out by use of an identifying telephone number provided by the non-authenticatable (*non-authenticated*) device. The step of authenticating preferably includes sending a message to the authenticatable mobile device, to which a reply is expected as explained above".

More specifically, language used for reciting general structure (configuration) and function (operation) of the apparatus component, an "**authentication communicator**", and the relationship with the "associator", and "the activity request", and, language used for reciting general manner or way of performing the method step or procedure of "**indicating**" using those apparatus components, in (currently amended) apparatus and method independent claims 1 and 46, are literally and clearly found therein.

> For example, at least on p. 13, lines 3 - 12, wherein it is stated:

"The associator 16 is preferably connected to an authentication communicator 23 for indicating to the server 18 that a given activity request is approved. Alternatively, the authentication communicator 23 may communicate (*indicate*) the authentication (*approval*) to an external proxy server or gateway associated with the non-authenticatable (*non-authenticated*) device. As a further alternative, the authentication communicator may communicate (*indicate*) the authentication (*approval*) to any device or network node responsible for managing

the activity which is the subject of the request. In a further embodiment, the authentication communicator 23 may communicate (*indicate*) the authentication (*approval*) by applying a change to a routing table on a router".

Applicants' preceding discussion of showing full and clear literal support for the herein amendments of apparatus and method independent claims 1 and 46, respectively, serves as the basis for overcoming Examiner's Item 9, 35 U.S.C. §112, second paragraph, rejections to claims 1-79. Applicants' response, including description of claims amendments, to the details of rejection of specific claims, regarding Examiner Item 9, is provided for each of Examiner Items 10 - 22, and 23, hereinbelow.

Item 10a:

The Examiner stated that in "claim 10: "said secure link" and "said secure mobile device", lack antecedent basis".

By this Amendment, in order to be fully and literally consistent with, and take proper antecedent basis from, (currently amended) apparatus independent claim 1, in (original) claim 10, in each of the phrases, "said secure link" and "said secure mobile device", the term "secure" has been replaced by the term "authenticatable", as recited in (currently amended) claim 10.

As previously stated hereinabove, in the Applicants' Note prior to Applicant's response to Examiner's Items 7 - 8, Applicants respectfully point out that throughout the entire specification (including the claims) of the present invention, including, for example, in the herein copied sections of text from the original specification, several words or terms, and their respective grammatically related forms, and therefore, phrases including such words or terms, are synonymously and equivalently used, and have the exact same meaning in the indicated text.

Regarding Examiner's Item 10a, Applicants respectfully point out that in the original specification, the terms "secure" and "authenticatable" (sometimes, also appearing as "authenticable"), for example, as appearing in the phrases "secure link" and "authenticatable link" (or "authenticable link"), and in the phrases "secure mobile device" and "authenticatable mobile device" (or "authenticable mobile device"), are synonymously and equivalently used, and have the exact same meaning. Such synonymous and equivalent use, and meaning, of the phrases "secure link" and "authenticatable link" (or "authenticable link"), appear in several places throughout the specification (including the claims), detailed discussion and specific examples of which are provided hereinbelow, as

part of Applicant's response to Examiner's Item 13, specifically regarding use of the term "authenticatable".

Applicants believe the preceding discussion, and current amendment of claim 10, completely overcome Examiner's Item 10a, 35 U.S.C. §112, second paragraph, rejection of said claim.

Item 10b:

The Examiner stated that in "claims 2 - 9 and 11: "said authenticatable link" lacks antecedent basis".

By this Amendment, as a result of the phrase "authenticatable link" appearing in (currently amended) independent apparatus claim 1, the same phrase has proper antecedent basis in each of (currently amended) claims 2-9, and 11.

Applicants believe the preceding clarification regarding claims 2-9, and 11, completely overcomes Examiner's Item 10b, 35 U.S.C. §112, second paragraph, rejection of said claims.

Item 10c:

The Examiner stated that in "claims 37 and 74: "said authorization" lacks antecedent basis".

By this Amendment, based on above described amendments of apparatus and method independent claims 1 and 46, respectively, along with appropriately amending the phrase including the term "authorization" in the respective dependent claims 37 and 74, the recitations of (currently amended) claims 37 and 74 have full and proper antecedent basis.

Applicants believe the preceding clarification, and current amendments of claims 37 and 74, completely overcome Examiner's Item 10c, 35 U.S.C. §112, second paragraph, rejection of said claims.

Item 10d:

The Examiner stated that in "claim 63: "said reply" lacks antecedent basis".

By this Amendment, based on above described amendment of method independent claim 46, along with appropriately amending the phrases including the term "reply" in dependent claims 62 and 63, the recitation, including the phrase "said reply", of (currently amended) claim 63 has full and proper antecedent basis. Further details of Applicants' amendments of dependent claims 62 and 63 are provided in response to Examiner's Items 17 and 20, respectively, hereinbelow.

Applicants believe the preceding clarification, and current amendment of claim 63, completely overcome Examiner's Item 10c, 35 U.S.C. §112, second paragraph, rejection of said claim.

Item 10e:

The Examiner stated that in "claims 76 - 78: "output" lacks antecedent basis".

As stated hereinabove, by this Amendment, Applicants have cancelled method dependent claim 76, since the limitations recited therein now appear in (currently amended) method independent claim 46. Accordingly, (currently amended) claims 77 and 78 depend therefrom. Based on cancellation of claim 76, and on above described amendment of method independent claim 46, the term "output" in each of (currently amended) claims 77 and 78 has full and proper antecedent basis.

Applicants believe the preceding clarification regarding (cancelled) claim 76 and (currently amended) claims 77 and 78, completely overcomes Examiner's Item 10e, 35 U.S.C. §112, second paragraph, rejection of said claims.

Item 11:

The Examiner stated that "It appears as claim 1 includes method steps and it is not clear how method steps relate to a claim to an apparatus".

By this Amendment, as shown and described hereinabove, apparatus independent claim 1 has been appropriately amended, being fully and literally supported by the specification, for properly reciting general structure (configuration) and function (operation) of the components of the claimed apparatus of the present invention. Applicants respectfully remind the Examiner that 'appropriate' and 'concise' recitation of function (operation) of components, although sometimes possibly appearing as procedure or step recitations, are allowable in an apparatus (device or system) claim, for the objective of 'particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention'.

Applicant believe the preceding comments, clarification, and current amendment of apparatus independent claim 1, completely overcome Examiner's Item 11, 35 U.S.C. §112, second paragraph, rejection of said claim.

Item 12:

The Examiner inquired into the clarity of the recitations of claims 1 and 46.

By this Amendment, as shown and described hereinabove, apparatus independent claim 1 has been appropriately amended, being fully and literally supported by the specification, for properly reciting general structure (configuration) and function

(operation) of each component of the claimed apparatus of the present invention. Apparatus (currently amended) independent claim 1 includes the recitation "an associator, operatively connected to said communicator, and operatively connected through an insecure or non-authenticated link to a non-authenticated device, for associating said authentication with an activity request".

Additionally, as shown and described hereinabove, method independent claim 46 has been appropriately amended, being fully and literally supported by the specification, for properly reciting general manner or way of performing each step or procedure of the claimed method of the present invention. Method (currently amended) independent claim 46 includes the recitation "associating said authentication with an activity request, by an associator operative with said communicator, and operative through an insecure or non-authenticated link with a non-authenticated device".

As stated hereinabove, apparatus and method independent claims 1 and 46, respectively, were amended in order to provide definiteness and to particularly point out and distinctly claim the subject matter which the Applicant regards as his invention. For accomplishing this, claims 1 and 46 were amended by removing non-clarities, inconsistencies, misunderstandings, and ambiguities, of the originally claimed subject matter, in order to provide clarity, consistency, understanding, and non-ambiguity, of the currently amended claimed subject matter. Moreover, apparatus and method independent claims 1 and 46, respectively, were amended to be totally consistent with, and complementary to, each other.

The Applicant believes the preceding comments and clarifications, and current amendments of apparatus and method independent claims 1 and 46, respectively, completely overcome Examiner's Item 12, 35 U.S.C. §112, second paragraph, rejection of said claims.

Item 13:

The Examiner stated that "The claim language uses the terms "authenticatable" and "non-authenticatable". These terms are not clear". The Examiner then provided selected copied sections of text from the original specification in which these terms appear, for supporting the Examiner's 35 U.S.C. §112, second paragraph claims rejection based on lack of clarity. Finally, the Examiner stated that "Clarification is required".

By this Amendment, in Applicants' hereinbelow response to Examiner's Item 13, Applicants put forth arguments, clarifications, and comments, makes appropriate amendments of the implicated claims, and provides literal, clear, and unambiguous,

support for the arguments, clarifications, comments, and claims amendments, for the objectives of clarifying the use and meaning of the indicated terms, throughout the specification (including the claims), as well as for providing amended claims which 'particularly point out and distinctly claim the subject matter which the applicant regards as his invention', in order that such (currently amended) claims be in full accordance with 35 U.S.C. §112, second paragraph.

Regarding use, and meaning, of the term "authenticatable" (or "authenticable"), the Applicant firmly contends that, use and meaning of the term "authenticatable" (or "authenticable") in various phrases, in particular, "authenticatable link" (or "authenticable link"), "authenticatable channel" (or "authenticable channel"), "authenticatable device" (or "authenticable device"), "authenticatable personalized device" (or "authenticable personalized device"), "authenticatable mobile device" (or "authenticable mobile device"), throughout the specification (including the claims), provide for the claims to 'particularly point out and distinctly claim the subject matter which the applicant regards as his invention'.

Applicants respectfully point out that the 'pure' (unbiased, untainted) literal meaning (definition, denotation) of the term "authenticatable" (or "authenticable") is 'having or possessing the ability or capability to be confirmed (verified, proven, assured, made certain, guaranteed) as being authentic'. Thus, throughout the specification (including the claims), in any phrase wherein the term "authenticatable" (or "authenticable") is used as preceding an *object* (e.g., link, channel, device), the 'pure' (unbiased, untainted) literal meaning (definition, denotation) of that phrase, generally written as 'authenticatable *object*' (or 'authenticable *object*') is that 'the *object* has or possesses the ability or capability to be confirmed (verified, proven, assured, made certain, guaranteed) as being authentic'. Such literal meaning (definition, denotation) of the general phrase 'authenticatable *object*' (or 'authenticable *object*') is clearly, and unambiguously, applicable to the particular phrases, "authenticatable link" (or "authenticable link"), "authenticatable channel" (or "authenticable channel"), "authenticatable device" (or "authenticable device"), "authenticatable personalized device" (or "authenticable personalized device"), "authenticatable mobile device" (or "authenticable mobile device"), which appear throughout the specification (including the claims) of the present invention.

Based on the preceding discussion, in view of properly understanding the present invention, Applicants contend there is not a single appearance of the term "authenticatable"

(or "authenticable"), singly or in combination with another term, in particular, preceding an object, such as in the above indicated phrases, in which the use and literal meaning (definition, denotation), throughout the specification (including the claims), fail to provide for the claims to 'particularly point out and distinctly claim the subject matter which the applicant regards as his invention'.

Additional clarification regarding use, and meaning, of the term "authenticatable" (or "authenticable"), throughout the specification (including the claims), is provided hereinbelow as follows.

As previously stated hereinabove, in the Applicants' Note prior to Applicants' response to Examiner's Items 7 - 8, and as part of Applicants' response to Examiner's Item 10a, Applicants respectively point out that throughout the entire specification (including the claims) of the present invention, including, for example, in the herein copied sections of text from the original specification, several words or terms, and their respective grammatically related forms, and therefore, phrases including such words or terms, are synonymously and equivalently used, and have the exact same meaning in the indicated text.

Throughout the entire specification (including the claims) of the present invention, the terms "authenticatable" (or "authenticable") and "secure" are synonymously and equivalently used, and have the exact same meaning in the indicated text. In particular, in the following phrases: "authenticatable link" (or "authenticable link") / "secure link"; "authenticatable channel" (or "authenticable channel") / "secure channel"; "authenticatable device" (or "authenticable device") / "secure device"; "authenticatable personalized device" (or "authenticable personalized device") / "secure personalized device"; and "authenticatable mobile device" (or "authenticable mobile device") / "secure mobile device"; the terms "authenticatable" (or "authenticable") and "secure" are synonymously and equivalently used, and have the exact same meaning.

Applicants respectfully remind the Examiner that, literally consistent and in accordance with the title of the present invention, the present invention is directed to an apparatus and method of "Authentication For Remote Connections". Moreover, in the specification, in the 'Field of the Invention' section, on p. 1, lines 13 - 17, it is clearly stated "The present invention relates to authentication for remote connections, for example for authenticating remote transactions or for ensuring that the correct user is billed for remotely provided services, and more particularly but not exclusively to providing

authentication to users connecting over channels which are not secure or over which a user cannot be positively identified".

In view of the preceding reminder, Applicants respectfully point out that among the several literal meanings (definitions, denotations) of the term "secure", the one which is literally in accordance and consistent with the specification (including the claims) of the present invention, and which is literally in accordance and consistent with the original 'intended' use and meaning of the inventors of the present invention, is: 'assured; certain; guaranteed'. In the context of the specification (including the claims) of the present invention, and in view of properly understanding the present invention, this particular literal meaning (definition, denotation) of the term "secure", is clearly synonymous and equivalent to the hereinabove 'pure' (unbiased, untainted) literal meaning (definition, denotation) of the term "authenticatable" (or "authenticable"), i.e., 'having the ability or capability to be confirmed (verified, proven, assured, made certain, guaranteed) as being authentic'.

Applicants contend that, throughout the specification (including the claims), synonymous and equivalent use, and meaning, of the term "secure" provide not only sufficient, but strong, literal, clear, and unambiguous, support to the use and meaning of the term "authenticatable" (or "authenticable"), in particular, in the above indicated phrases which include the term "authenticatable" (or "authenticable").

Applicants' preceding contentions are literally, clearly, and unambiguously, supported by such synonymous and equivalent use, and meaning, of the terms "authenticatable" (or "authenticable") and "secure", appearing in several places throughout the specification, including in several portions of text throughout the 'Summary of the Invention' section, the 'Brief Description of the Drawings' section, and the 'Description of the Preferred Embodiments' section, along with reference to Figs. 1 - 5.

Since the term "authenticatable" (or "authenticable") literally appears in more than one hundred (100) places throughout the entire specification, therefore, hereinbelow, the Applicant only provides specific examples of the synonymous and equivalent use, and meaning, of the term "secure", for the purpose of providing not only sufficient, but strong, literal, clear, and unambiguous, support to the use and meaning of the term "authenticatable" (or "authenticable"), in particular, in the above indicated phrases including the term "authenticatable" (or "authenticable").

> For example, in the 'Summary of the Invention' section, on p. 3, lines 15 - 20, wherein it is stated:

"Preferably, said secure link involves a subscriber identity module located at said secure mobile device"... "Preferably, said authenticatable link is a secure link utilizing a subscriber identity module located at said authenticatable device".

> Additionally, for example, in the 'Brief Description of the Drawings' section, with reference to the element "Authenticatable Link 14" in Fig. 1, on p. 9, lines 16 - 17, wherein it is stated:

"Fig. 2 is a simplified pictorial diagram showing a device for use in the secure link of Fig. 1"

> Additionally, for example, in the 'Brief Description of the Drawings' section, with reference to the block "Authenticate on Link 1" in Fig. 5, on p. 10, lines 1 - 3, wherein it is stated:

"Fig. 5 is a simplified flow chart showing operation of the authentication mechanism of Fig. 1, where the setup may start from any device, secure or unsecured, including setup from a different device".

> Additionally, for example, in the 'Description of the Preferred Embodiments' section, with reference to Fig. 1, on p. 11, lines 13 - 14, wherein it is stated:

"The communicator is able to communicate with a first personalized device 12 via an authenticatable link 14 such as a GSM or CDMA link as well as any extension thereof (GPRS, UMTS, etc.)".

> Additionally, for example, in the 'Description of the Preferred Embodiments' section, on p. 11, lines 21 - 23, wherein it is stated:

"The communication preferably takes advantage of user authentication, which is a feature of GSM or CDMA. Additional authentication can be provided by a link 14 and the device 12, additionally supporting encryption".

> Additionally, for example, in the 'Description of the Preferred Embodiments' section, on p. 13, lines 13 - 15, wherein it is stated:

"In addition to GSM and CDMA, a non-exhaustive list of other systems currently available that provide secure links includes IS-136, PDC, EDGE, WCDMA, GPRS, Iridium, and GlobalStar".

> Additionally, for example, in the 'Description of the Preferred Embodiments' section, with reference to Fig. 2, on p. 13, lines 19 - 22, wherein it is stated:

"The GSM device comprises a SIM which consists of one or more integrated circuits where at least one of those contains personalized data that supports authentication, encryption and decryption for the secure link 14".

> Additionally, for example, in the 'Description of the Preferred Embodiments' section, on p. 14, lines 4 - 9, wherein it is stated:

"The secure link 14 is also secure for voice communication and it is possible to provide automatic voice message construction functionality at the communicator 10 to construct messages from pre-recorded message sections. Additionally it is possible to provide an artificial voice. Either way a voice message may be sent to the personalized device over the secure link".

> Additionally, for example, in the 'Description of the Preferred Embodiments' section, on p. 15, lines 18 - 22, wherein it is stated:

"If such a password embodiment is used, the authenticating (authenticatable) link is preferably encrypted, so as not to reveal the password. Alternatively the password may only be used a limited number of times, for example only once, in which case the authenticating (authenticatable) link need not be encrypted".

> Additionally, for example, in the 'Description of the Preferred Embodiments' section, on p. 19, lines 4 - 11, wherein it is stated:

"The number is preferably used for establishing a communication with the secure mobile device. However, in those embodiments in which communication is initiated from the secure mobile device, the telephone number is preferably used to associate the secured and non-authenticatable links that have already been established".

> Additionally, for example, in the 'Description of the Preferred Embodiments' section, on p. 21, with reference to Fig. 5, lines 1 - 9, wherein it is stated:

"Reference is now made to Fig. 5, which is a simplified flow chart showing verification of a non-authenticatable channel via an authenticatable channel according to an embodiment of the present invention. In Fig. 5, authenticating the link comprises steps of communicating via an authenticatable link with an authenticatable device, verifying, using the authentication procedures of the link, that the communication is with an intended mobile device, setting up a second link via a non-authenticatable second channel or link".

> Additionally, for example, in the 'Description of the Preferred Embodiments' section, on p. 21, lines 14 - 16, wherein it is stated:

"The step of authenticating preferably includes sending a message to the authenticatable mobile device, to which a reply is expected as explained above".

Based on the preceding discussion, the Applicant additionally contends that, use, and meaning, of the term "authenticatable" (or "authenticable"), in view of the synonymous and equivalent use, and meaning, of the term "secure", in the above indicated phrases, provide for the claims to 'particularly point out and distinctly claim the subject matter which the applicant regards as his invention'.

However, Applicants do acknowledge that there are several (not all) claims which include the term "authenticatable" (or "authenticable") in the above indicated phrases, whose accompanying or surrounding language (linguistics), sentence structure, or/and grammar, may insufficiently provide for the claims to 'particularly point out and distinctly claim the subject matter which the applicant regards as his invention'.

Accordingly, by this Amendment, Applicants have amended language (linguistics), sentence structure, or/and grammar, accompanying or surrounding the term "authenticatable" (or "authenticable"), in those claims which include, or/and depend upon, said term, in a manner which fully provides for the claims to 'particularly point out and distinctly claim the subject matter which the applicant regards as his invention'.

Regarding use, and meaning, of the term "non-authenticatable" (or "non-authenticable"), Applicants acknowledge that, use and meaning of the term "non-authenticatable" (or "non-authenticable") in its present (not necessarily clearest and most concise) 'grammatical' form, throughout the specification (including the claims), may be initially understood or perceived as insufficiently providing for the claims to 'particularly point out and distinctly claim the subject matter which the applicant regards as his invention'.

Applicants acknowledge that the 'pure' (unbiased, untainted) literal meaning (definition, denotation) of the term "non-authenticatable" (or "non-authenticable") is 'lacking or absent of the ability or capability to be confirmed (verified, proven, assured, made certain, guaranteed) as being authentic'. Thus, throughout the specification (including the claims), in any phrase wherein the term "non-authenticatable" (or "non-authenticable") is used as preceding an *object* (e.g., link, channel, device), the 'pure' (unbiased, untainted) literal meaning (definition, denotation) of that phrase, generally written as 'non-authenticatable *object*' (or 'non-authenticable *object*') is that 'the *object* is lacking or absent of the ability or capability to be confirmed (verified, proven, assured, made certain, guaranteed) as being authentic'. Such literal meaning (definition, denotation) of the general phrase 'non-authenticatable *object*' (or 'non-authenticable *object*') is

applicable to the particular phrases, "non-authenticatable link" (or "non-authenticable link"), "non-authenticatable channel" (or "non-authenticable channel"), "non-authenticatable device" (or "non-authenticable device"), "non-authenticatable personalized device" (or "non-authenticable personalized device"), "non-authenticatable mobile device" (or "non-authenticable mobile device"), which appear throughout the specification (including the claims) of the present invention.

However, Applicants firmly contend that it is clearly obvious to one of ordinary skill in the art that, by properly understanding the present invention, the Applicant's original intended use and meaning of the term "non-authenticatable" (or "non-authenticable") is that, for any of a variety of reasons, at least from the time of the "non-authenticatable device" or/and the "authenticatable device" initiating and making the "activity request", up until, or prior to, the time at which the "activity request is approved" by completion of operation of the apparatus and method of the present invention, the "non-authenticatable device" is considered, and functions or operates, as a non-authenticated device, i.e., as a device which has not yet been authenticated, and may, but not necessarily, be that the "non-authenticatable" device lacks the ability or capability to be authenticated.

In other words, Applicants originally intended that use and meaning of the "non-authenticatable device" be illustratively described as a device which either is lacking or absent of, or, alternatively, may have, the ability or capability to be confirmed (verified, proven, assured, made certain, guaranteed) as being authentic', such that in any mode or embodiment of operation of the present invention, for any of a variety of reasons, at least from the time of the "non-authenticatable device" or/and the "authenticatable device" initiating and making the "activity request", up until, or prior to, the time at which the "activity request is approved", the "non-authenticatable device" is considered, and functions or operates, as a non-authenticated device, i.e., as a device which has not yet been authenticated, wherein the "non-authenticatable" device either lacks or has the ability or capability to be authenticated.

More specifically, for a mode or embodiment of operation of the present invention, in which the "non-authenticatable device" **is known to be lacking or absent** of the ability or capability to be confirmed (verified, proven, assured, made certain, guaranteed) as being authentic', then, clearly and unambiguously, for any of a variety of reasons, at least from the time of the "non-authenticatable device" or/and the "authenticatable device" initiating and making the "activity request", up until, or prior to, the time that the "activity request is

approved", the "non-authenticatable device" is considered, and functions or operates, as a non-authenticated device, i.e., as a device which has not yet been authenticated.

However, for an alternative mode or embodiment of operation of the present invention, in which the "non-authenticatable device" functioning or operating at other times under different conditions is either known to, or may, have the ability or capability to be confirmed (verified, proven, assured, made certain, guaranteed) as being authentic', then, the "non-authenticatable" aspect or characteristic of the device during the time of implementing the present invention, refers, and is limited, to at least from the time of the "non-authenticatable device" or/and the "authenticatable device" initiating and making the "activity request", up until, or prior to, the time at which the "activity request is approved". In such a mode or embodiment of operation of the present invention, the "non-authenticatable device" (although possibly authenticatable when functioning or operating at other times under different conditions), at the time of implementing the present invention, is considered, and functions or operates, as a **non-authenticated device, i.e., as a device which has not yet been authenticated.**

The above clarification of Applicants' original intended use and meaning of the term "non-authenticatable" (or "non-authenticable") literally, clearly, and unambiguously, reconciles the 'apparent' or 'perceived' lack of clarity and inconsistency in Applicants' use and meaning of the term "non-authenticatable" (or "non-authenticable") throughout the original specification (including the claims).

For example, in Examiner's Item 13, the Examiner included a copy of the following passage from the specification, in the 'Description of the Preferred Embodiments' section, on p. 12, lines 6 - 8, wherein it is stated: "In the present context, a non-authenticatable link is a link through which users or requesting devices cannot be positively identified, and particularly includes general Internet connections". Additionally, in Examiner's Item 13, the Examiner stated that "There are many objects that make a link (such as Internet connection) "authenticatable", e.g., cookies, password, certificates etc."

By applying the above clarification of Applicants' original intended use and meaning of the term "non-authenticatable", then, the above quoted Applicant's 'definition' of a "non-authenticatable link" is literally, clearly, and unambiguously, understood as follows:

"In the present context, a non-authenticatable link is a link through which users or requesting devices cannot be positively identified, for any of a variety of reasons, at least from the time of the "non-authenticatable device" or/and the "authenticatable device"

initiating and making the "activity request", up until, or prior to, the time at which the "activity request is approved" by completion of operation of the apparatus and method of the present invention, and particularly includes general Internet connections".

Accordingly, the "non-authenticatable" aspect or characteristic of the "non-authenticatable link" during the time of implementing the present invention, refers, and is limited, to **at least** from the time of the "non-authenticatable device" or/and the "authenticatable device" initiating and making the "activity request" via the "non-authenticatable link", up until, or prior to, the time at which the "activity request is approved" by completion of operation of the apparatus and method of the present invention. In such a mode or embodiment of operation of the present invention, the "non-authenticatable link" (although possibly authenticatable (e.g., via cookies, password, certificates, etc.) when functioning or operating at other times under different conditions), **at least** at the time of implementing the present invention, is considered, and functions or operates, as an **insecure or non-authenticated link**, i.e., as a **link which is insecure or has not yet been authenticated**.

Moreover, in the specification, in the same section of text, on p. 12, lines 9 - 11, the sentence immediately following the above quoted Applicant's 'definition' of a "non-authenticatable link", states:

"The inability to identify the requesting device may be due to there being no strong authentication mechanism such (as) a SIM card, or because the link itself is insecure, allowing eavesdropping and impersonation or for any other reason."

Thus, the preceding statement from the specification corresponds to a quite logical, plausible, and very realistic, clarification of the "non-authenticatable" aspect or characteristic of the "non-authenticatable link" during the time of implementing the present invention. Namely, that there exists the possibility that the "requesting device", i.e., the "non-authenticatable device", is functional or operative with "there being no strong authentication mechanism such (as) a SIM card, or because the link itself is insecure, allowing eavesdropping and impersonation or for any other reason".

This clarification literally, clearly, and unambiguously, indicates the following three possibilities as to why the "link" is "insecure or non-authenticatable", and is therefore, insecure or non-authenticated, during the time of implementing the present invention: (1) "there being no strong authentication mechanism", which is clearly understood that an "authentication mechanism" **may** very well exist, but such an "authentication mechanism" is "not strong", or, alternatively, (2) "because the link itself is

insecure, allowing eavesdropping and impersonation", or, alternatively, "for any other reason".

Additionally, for example, the Examiner included a copy of the following passage of the specification, from the 'Description of the Preferred Embodiments' section, on p. 17, lines 16 - 17, wherein it is stated:

"In an alternative embodiment, the non-authenticatable device 22 may be a credit card or a smart card ..."

Again, by applying the above clarification of Applicants' original intended use and meaning of the term "non-authenticatable", then, the above quoted Applicant's 'alternative embodiment' of a "non-authenticatable device" is literally, clearly, and unambiguously, understood as follows:

"In an alternative embodiment, the non-authenticatable device 22 may be a credit card or a smart card ...", which, for any of a variety of reasons, at least from the time of the "credit card" or "smart card" (i.e., the "non-authenticatable device") or/and the "authenticatable device" initiating and making the "activity request", up until, or prior to, the time at which the "activity request is approved" by completion of operation of the apparatus and method of the present invention, the "credit card" or "smart card" (although possibly authenticatable when functioning or operating at other times under different conditions), at the time of implementing the present invention, is considered, and functions or operates, as a non-authenticated credit card or smart card, i.e., as a credit card or smart card which has not yet been authenticated.

Additional clarification regarding use, and meaning, of the term "non-authenticatable" (or "non-authenticable"), throughout the specification (including the claims), is provided hereinbelow as follows.

Throughout the entire specification (including the claims) of the present invention, the terms "non-authenticatable" (or "non-authenticable") and "insecure" or "unsecure", are synonymously and equivalently used, and have the exact same meaning in the indicated text. In particular, in the following phrases: "non-authenticatable link" (or "non-authenticable link") / "insecure link"; "non-authenticatable device" (or "non-authenticable device") / "insecure device" or "unsecure device"; and "non-authenticatable connections" (or "non-authenticable connections") / "unsecured connections"; the terms "non-authenticatable" (or "non-authenticable") and "insecure" or "unsecure", are synonymously and equivalently used, and have the exact same meaning.

Applicants contend that, throughout the specification (including the claims), synonymous and equivalent use, and meaning, of the terms "insecure" or "unsecure" provide not only sufficient, but strong, literal, clear, and unambiguous, support to the use and meaning of the term "non-authenticatable" (or "non-authenticable"), in particular, in the above indicated phrases which include the term "non-authenticatable" (or "non-authenticable").

Applicants' preceding contentions are literally, clearly, and unambiguously, supported by such synonymous and equivalent use, and meaning, of the terms "non-authenticatable" (or "non-authenticable"), "insecure", and "unsecure", appearing in several places throughout the specification, including in several portions of text throughout the 'Field of the Invention' section, the 'Background of the Invention' section, the 'Brief Description of the Drawings' section, and the 'Description of the Preferred Embodiments' section, along with reference to Figs. 1 - 5.

Since the term "non-authenticatable" (or "non-authenticable") literally appears in more than seventy (70) places throughout the entire specification, therefore, hereinbelow, the Applicant only provides specific examples of the synonymous and equivalent use, and meaning, of the terms "insecure" or "unsecure", for the purpose of providing not only sufficient, but strong, literal, clear, and unambiguous, support to the use and meaning of the term "non-authenticatable" (or "non-authenticable"), in particular, in the above indicated phrases including the term "non-authenticatable" (or "non-authenticable").

> For example, in the 'Field of the Invention' section, on p. 1, lines 13 - 17, wherein it is stated:

"The present invention relates to authentication for remote connections, for example for authenticating remote transactions or for ensuring that the correct user is billed for remotely provided services, and more particularly but not exclusively to providing authentication to users connecting over channels which are not secure or over which a user cannot be positively identified".

> Additionally, for example, in the 'Background of the Invention' section, from p. 1, line 20, to p. 2, line 4, wherein it is stated:

"Currently there are numerous circumstances in which transactions are carried out without the physical proximity of the transacting parties. Such circumstances include ATM transactions, credit card and other transactions made by telephone, and transactions made over the Internet. Generally, the identity of the purchasing party is not established to a high degree in such transactions. The

transactions are carried out over unsecured and/or non-authenticatable connections and using communication techniques that are insecure and/or non-authenticatable, allowing users to be impersonated and credit card numbers to be stolen".

> Additionally, for example, in the 'Brief Description of the Drawings' section, with reference to element "Insecure Link 20" in Fig. 1, on p. 9, lines 18 - 19, wherein it is stated:

"Fig. 3 is a simplified pictorial diagram showing a device for use in the insecure link of Fig. 1"

> Additionally, for example, in the 'Brief Description of the Drawings' section, with reference to the block "Authenticate on Link 1" in Fig. 5, on p. 10, lines 1 - 3, wherein it is stated:

"Fig. 5 is a simplified flow chart showing operation of the authentication mechanism of Fig. 1, where the setup may start from any device, secure or unsecured, including setup from a different device".

> Additionally, for example, in the 'Description of the Preferred Embodiments' section, on p. 10, lines 10 - 13, wherein it is stated:

"In accordance with the embodiments of the present invention, a user is enabled to set up a transaction over any unsecured or secured means at his disposal, following which the transaction is confirmed or authorized via his/her mobile telephone".

> Additionally, for example, in the 'Description of the Preferred Embodiments' section, on p. 12, lines 9 - 13, wherein it is stated:

"The inability to identify the requesting device may be due to there being no strong authentication mechanism such a SIM card, or because the link itself is insecure, allowing eavesdropping and impersonation or for any other reason.

The mechanism of Fig. 1 thus solves the problem of the insecure link by requiring an extra leg of communication via an authenticable link".

> Additionally, for example, in the 'Description of the Preferred Embodiments' section, with reference to Fig. 1, on p. 14, lines 12 - 18, wherein it is stated:

"In a particularly preferred embodiment of the present invention, a device corresponding to a potential user of a service requests the service via the insecure link 20. The insecure link 20 may be any kind of network, particularly an open network such as the Internet, or other digital or analogue networks, and may

include a LAN, a Wireless LAN (WLAN), in particular any WLAN corresponding to the IEEE 802.11 standards, including 802.11, 802.11b, 802.11a...g, etc".

> Additionally, for example, in the 'Description of the Preferred Embodiments' section, on p. 16, lines 6 - 7, wherein it is stated:

"The problem may be reduced by requiring the non-secure device to use a password, in addition to the MSISDN".

Applicants firmly contend that the hereinabove detailed clarification of Applicant's original intended use and meaning of the term "non-authenticatable" (or "non-authenticable") is literally, clearly, and unambiguously, applicable to the entire specification (including the claims), in particular, the above exemplary portions of text in the specification, wherein the terms "insecure" or "unsecure" are synonymously and equivalently used, and mean the exact same, as the term "non-authenticatable" (or "non-authenticable").

The preceding discussion provides additional support for literally, clearly, and unambiguously, reconciling the 'apparent' or 'perceived' lack of clarity and inconsistency in Applicant's use and meaning of the term "non-authenticatable" (or "non-authenticable") throughout the original specification (including the claims).

Nevertheless, as previously stated hereinabove, the Applicant acknowledges that, use and meaning of the term "non-authenticatable" (or "non-authenticable") in its present (not necessarily clearest and most concise) 'grammatical' form, throughout the specification (including the claims), may be initially understood or perceived as insufficiently providing for the claims to 'particularly point out and distinctly claim the subject matter which the applicant regards as his invention'.

Accordingly, by this Amendment, in order to fully overcome and remove such initial misunderstanding or perception regarding use, and meaning, of the term "non-authenticatable" (or "non-authenticable"), in apparatus independent claim 1, and in claims 20, 21, 22, 24, 33 - 36, 38, and 40, depending therefrom, and, in method independent claim 46, and in claims 61, 63, 72 - 73, 75, and 77, depending therefrom, the term "non-authenticatable" (or "non-authenticable") in its present (not necessarily clearest and most concise) 'grammatical' form in the phrase "non-authenticatable device" (or "non-authenticable device"), has been amended to the (clearer and more concise) 'grammatical' form of "non-authenticated", such that the amended phrase recites "non-authenticated device".

In a similar manner, by this Amendment, in method dependent claim 71, the term "non-authenticatable" (or "non-authenticable") in its present (not necessarily clearest and most concise) 'grammatical' form in the phrase "non-authenticatable device", has been amended to the (clearer and more concise) 'grammatical' form of "non-authenticated", such that the amended phrase recites "insecure or non-authenticated link".

Moreover, Applicants also acknowledge that there are several (not all) claims which include the term "non-authenticatable" (or "non-authenticable") in the above indicated phrases, whose accompanying or surrounding language (linguistics), sentence structure, or/and grammar, may insufficiently provide for the claims to 'particularly point out and distinctly claim the subject matter which the applicant regards as his invention'.

Accordingly, by this Amendment, Applicant have also amended language (linguistics), sentence structure, or/and grammar, accompanying or surrounding the term "non-authenticatable" (or "non-authenticable"), in those claims which include, or/and depend upon, said term, in a manner which fully provides for the claims to 'particularly point out and distinctly claim the subject matter which the applicant regards as his invention'. Such claims were amended by removing non-clarities, indefiniteness, inconsistencies, misunderstandings, and ambiguities, of the originally claimed subject matter, in order to provide clarity, definiteness, consistency, understanding, and non-ambiguity, of the currently amended claimed subject matter.

Thus, by the hereinabove response to Examiner's Item 13, regarding lack of clarity of the use and meaning of the terms "authenticatable" and "non-authenticatable", the Applicant has put forth arguments and comments, made appropriate amendments of the implicated claims, and provided literal, clear, and unambiguous, support for the arguments, comments, and claims amendments, for the objectives of clarifying the use and meaning of the indicated terms, throughout the specification (including the claims), as well as for providing amended claims which 'particularly point out and distinctly claim the subject matter which the applicant regards as his invention', in order that such (currently amended) claims be in full accordance with 35 U.S.C. §112, second paragraph.

Applicants believe the preceding discussion, clarifications, and amendments of the claims, completely overcome Examiner's Item 13, 35 U.S.C. §112, second paragraph, rejection of the claims.

Item 14:

The Examiner stated that "Claims 2-9, 16 and 47-54 recite acronyms: WAP, GSM, CDMA, IS-136, PDC, EDGE, WCDMA, GPRS and Iridium (directed to network links and

associated devices that are not described in the specification. For purposes of further examination the acronyms are treated as different network links".

Applicants confirm Examiner's treatment of the above indicated acronyms. Additionally, the Applicant respectfully submits that all of the above indicated acronyms, representing different types of network links and associated devices, as embodied and exemplified by the present invention, and appearing in the indicated claims, are well known to one of ordinary skill in the art.

Moreover, Applicants firmly contend that descriptive details of the above indicated acronyms, representing different types of network links and associated devices, being well known to one of ordinary skill in the art, are not needed in the specification for properly describing and understanding implementation of the relevant aspects, embodiments, and examples, of the present invention.

Accordingly, Applicants firmly contend that the above indicated acronyms, representing different types of network links and associated devices, appearing in claims 2-9, 16 and 47-54, sufficiently provide for said claims to 'particularly point out and distinctly claim the subject matter which the applicant regards as his invention', in full compliance with 35 U.S.C. §112, second paragraph.

Nevertheless, in view of the preceding discussion and clarification of the subject matter, regarding acronyms, recited in (original) claims 2-9, 16 and 47-54, by this Amendment, (original) claims 2-9, 16, and 47-54, each including one or more of the above indicated acronyms, were amended by adding the spelled out full name of the acronym, or by adding the spelled out full 'generic technical name' associated with the acronym, in parentheses immediately following the first appearance of each acronym, for the objective of further providing said claims to 'particularly point out and distinctly claim the subject matter which the applicant regards as his invention', in full compliance with 35 U.S.C. §112, second paragraph.

In particular, apparatus claim 2 and corresponding method claim 47 were each amended by adding the spelled out full name of the acronym "GSM", being "global system mobile telecommunications", in parentheses immediately following the first appearance of the acronym "GSM".

In particular, apparatus claim 3 and corresponding method claim 48 were each amended by adding the spelled out full name of the acronym "CDMA", being "code division multiple access", in parentheses immediately following the first appearance of the acronym "CDMA".

In particular, apparatus claim 4 and corresponding method claim 49 were each amended by adding the spelled out full 'generic technical name' associated with the acronym "IS-136", being a "second generation mobile phone system", in parentheses immediately following the first appearance of the acronym "IS-136".

In particular, apparatus claim 5 and corresponding method claim 50 were each amended by adding the spelled out full name of the acronym "PDC", being "personal digital cellular", in parentheses immediately following the first appearance of the acronym "PDC".

In particular, apparatus claim 6 and corresponding method claim 51 were each amended by adding the spelled out full name of the acronym "EDGE", being "enhanced data rates for global system mobile telecommunications evolution", in parentheses immediately following the first appearance of the acronym "EDGE". Relatedly, in method claim 51, the typographically incorrect term "edge", identifying the acronym "EDGE", has been amended to the correct term "EDGE", thereby correctly identifying the acronym "EDGE", in order to be consistent with appearance of the acronym "EDGE" in the specification.

In particular, apparatus claim 7 and corresponding method claim 52 were each amended by adding the spelled out full name of the acronym "WCDMA", being "wideband code division multiple access", in parentheses immediately following the first appearance of the acronym "WCDMA".

In particular, apparatus claim 8 and corresponding method claim 53 were each amended by adding the spelled out full name of the acronym "GPRS", being "general packet radio service", in parentheses immediately following the first appearance of the acronym "GPRS".

In particular, apparatus claim 9 and corresponding method claim 54 were each amended by adding the spelled out full 'generic technical name' associated with the acronym "Iridium", being a "network protocol", in parentheses immediately following the first appearance of the acronym "Iridium".

In particular, apparatus claim 16 was amended by adding the spelled out full name of the acronym "WAP", being "wireless application protocol", in parentheses immediately following the acronym "WAP".

It is respectfully noted that, in (currently amended) claims 2 - 9, 16, and 47 - 54, each spelled out full name of the acronym, or spelled out full 'generic technical name'

associated with the acronym, is well known, taught about, and used, in the field and art of the present invention.

Applicants believe the preceding discussion, clarifications, and current amendments of claims 2-9, 16, and 47-54, completely overcome Examiner's Item 14, 35 U.S.C. §112, second paragraph, rejection of said claims.

Item 15:

The Examiner stated that "Claims 18 and 19 recite acronyms: EMS and MMS that are not described in the specification. For purposes of further examination the acronyms are treated as different electronic messaging".

Applicants confirm Examiner's treatment of the above indicated acronyms. Additionally, the Applicant respectfully submits that all of the above indicated acronyms, representing different types of electronic messaging, as embodied and exemplified by the present invention, and appearing in the indicated claims, are well known to one of ordinary skill in the art.

Moreover, the Applicant firmly contends that descriptive details of the above indicated acronyms, representing different types of electronic messaging, being well known to one of ordinary skill in the art, are not needed in the specification for properly describing and understanding implementation of the relevant aspects, embodiments, and examples, of the present invention.

Accordingly, Applicants firmly contend that the above indicated acronyms, representing different types of electronic messaging, appearing in claims 18 and 19, sufficiently provide for said claims to 'particularly point out and distinctly claim the subject matter which the applicant regards as his invention', in full compliance with 35 U.S.C. §112, second paragraph.

Nevertheless, in view of the preceding discussion and clarification of the subject matter, regarding acronyms, recited in claims 18 and 19, by this Amendment, (original) claims 18 and 19 were each amended by adding the spelled out full name of the indicated acronym, in parentheses immediately following the acronym, for the objective of further providing said claims to 'particularly point out and distinctly claim the subject matter which the applicant regards as his invention', in full compliance with 35 U.S.C. §112, second paragraph.

In particular, apparatus claim 18 was amended by adding the spelled out full name of the acronym "EMS", being "enhanced messaging service", in parentheses immediately following the acronym "EMS".

In particular, apparatus claim 19 was amended by adding the spelled out full name of the acronym "MMS", being "multimedia messaging system", in parentheses immediately following the acronym "MMS".

It is respectfully noted that, in (currently amended) claims 18 and 19, each spelled out full name of the acronym, is well known, taught about, and used, in the field and art of the present invention.

Applicants believe the preceding discussion, clarifications, and current amendments of claims 18 and 19, completely overcome Examiner's Item 15, 35 U.S.C. §112, second paragraph, rejection of said claims.

Relatedly, in addition to the preceding amendments of those claims specifically indicated by the Examiner in Examiner's Items 14 and 15, regarding the appearance of acronyms, the Applicant has amended claims 15 and 60, each including the acronym "SMS", and, has amended claims 36 and 73, each including the acronym "PDA".

In particular, apparatus claim 15 and method claim 60, the acronym "SMS", also corresponding to a type of electronic messaging (service), were each amended by adding the spelled out full name of the acronym "SMS", being "short messaging service", in parentheses immediately following the acronym "SMS", in order to remove any doubt, and therefore, to provide clarity, as to what the term "SMS" represents in claims 15 and 60.

Support for preceding amendments of claims 15 and 60 is literally and clearly found in the original specification of the disclosed invention, particularly, at least, in the 'Description of the Preferred Embodiments' section, on p. 20, lines 9 - 11, wherein it is stated: "The portal is connected directly or indirectly to a short message service center SMS-C 38, the network element that manages SMS messaging".

In particular, apparatus claim 36 and method claim 73 were each amended by adding the spelled out full name of the acronym "PDA", being "personal digital assistant", in parentheses immediately following the acronym "PDA", in order to remove any doubt, and therefore, to provide clarity, as to what the term "PDA" represents in claims 36 and 73.

Support for preceding amendments of claims 36 and 73 is literally and clearly found in the original specification of the disclosed invention, particularly, at least, in the 'Summary of the Invention' section, on p. 3, lines 21 - 23, wherein it is stated: "Preferably, said authenticatable device is a mobile telephone, but alternatively it may be a personal digital assistant, portable computer or any other communication device that is able to maintain an authenticatable link".

Applicants respectfully request allowance of the preceding amendments of claims 15 and 60, and, claims 36 and 73.

Relatedly, in addition to the preceding amendments of those claims specifically indicated by the Examiner in Examiner's Items 14 and 15, regarding the appearance of acronyms, the Applicant has amended the specification, without introducing new subject matter, in order to improve compliance with 35 U.S.C. §112, first and second paragraphs, regarding the appearance of acronyms and trademarks/trade names throughout the entire specification (including the claims). As clearly shown hereinabove, on p. 2 of this Amendment, the Applicant has inserted three paragraphs immediately following the section title "Description of the Preferred Embodiments", appearing at page 10, line 5, and immediately before the paragraph beginning at page 10, line 6.

As Applicants state therein, "Herein, throughout the specification of the present invention, including the claims thereof, acronyms are used for referring to several particular types of protocols for using network links, and, associated devices and systems, where the acronyms, and the particular types of protocols, are well known, taught about, and used, in the field and art of the present invention. Additionally, herein, acronyms are used for referring to particular types of electronic messaging services or systems, where the acronyms, and the particular types of electronic messaging, are well known, taught about, and used, in the field and art of the present invention. Additionally, herein, a trademark/trade name and acronyms are used for referring to particular types of networks, where the trademark/trade name, the acronyms, and the particular types of networks, are well known, taught about, and used, in the field and art of the present invention".

Applicants respectfully request allowance of the preceding amendment of the specification.

Item 16:

The Examiner stated that "Claims 30-32 and 69-70 recite that the apparatus connects to non-authenticatable devices via Bluetooth, infra-red or WLAN access points but no details in regard to these technologies are provided in the specification. For purposes of further examination the Bluetooth, infra-red and WLAN are treated as alternative connection means to non-authenticatable devices".

Applicants confirm Examiner's treatment of the above indicated types of network connection means.

As a reference to Applicants' response to Examiner's Item 16, Applicants point out that in the specification, literal basis and 'intended meaning' of the recitations of (original) apparatus claims 30-32 and method claims 69-79, are provided as follows:

> In the 'Summary of the Invention' section, on p. 4, lines 22 - 23, wherein it is stated:

"The network may typically comprise infra-red access points.

Alternatively, said network may comprise Bluetooth access points".

> Additionally, in the 'Description of the Preferred Embodiments' section, from p. 18, line 16, to p. 19, line 3, wherein it is stated:

"The requested activity may for example be access to a network, that is to say the user requests access to a LAN or to the Internet or the like. It thus enables the provision of roaming Internet, the ability to log on to the Internet using local resources when traveling and not in the proximity of one's own Internet provider.

In particular, the network to which access may be requested may be a network accessed via Wireless LAN access points or infra-red access points or via Bluetooth access points. The idea of Wireless LAN or infra-red or Bluetooth is to provide flexible network access to all devices in proximity of the access points and the present embodiments allow for potential users to be identified and charged for the service".

> Additionally, in the 'Description of the Preferred Embodiments' section, along with reference to Fig. 4, from p. 19, line 18, to p. 20, line 3, wherein it is stated:

"Reference is now made to Fig. 4 which is a simplified block diagram showing a further embodiment of verification apparatus according to the invention, with component parts shown in greater detail. A non-authenticatable device such as a PDA 30 [31 - refer to Applicant's response to Examiner's Item 2, hereinabove] communicates wirelessly via network access points 32, to a LAN/WAN 34, which itself may be wired or wireless. The LAN may be connected directly (or indirectly) to a cellular Internet authentication portal 36, and may be a means of providing the user with access to the Internet or any other data network or services. The portal 36 preferably appears to the PDA 30 [31] as a standard Internet authentication device to which it logs in as normal".

Applicants respectfully point out that from the hereinabove copied sections of text from the original specification, it is clearly and literally understood that the indicated

subject matter specifically focuses on the different exemplary specific alternative manners or ways, i.e., via "LAN", "WAN", "infra-red", or "Bluetooth", types of access points, by which "the requested activity" (or "activity request"), being "access to a network", is performed or carried out. In other words, the indicated subject matter specifically focuses mainly on "the requested activity" (or "activity request"), being "access to a network", being made via access to different exemplary specific alternative types of networks, i.e., "LAN", "WAN", "infra-red", or "Bluetooth", types of networks, via respective "LAN", "WAN", "infra-red", or "Bluetooth", types of access points.

Clearly, the indicated subject matter does not focus on, and does not attempt to focus on, structure or function of "LAN", "WAN", "infra-red", or "Bluetooth", types of networks themselves, or on the respective types of network access points themselves, but, rather focuses on the "the requested activity" (or "activity request"), being "access to a network", i.e., "LAN", "WAN", "infra-red", or "Bluetooth", types of networks, wherein the "the requested activity" (or "activity request"), being "access to a network", is performed or carried out via respective types of network access points.

Applicants respectfully submit that the technologies encompassing different exemplary specific alternative manners or ways, i.e., via "LAN", "WAN", "infra-red", or "Bluetooth", types of network access points, by which "the requested activity" (or "activity request"), being "access to a network", i.e., "LAN", "WAN", "infra-red", or "Bluetooth", types of networks, is performed or carried out, as embodied and exemplified by the present invention, are well known to one of ordinary skill in the art.

Moreover, Applicants firmly contend that details of the technologies encompassing different exemplary specific alternative manners or ways, i.e., via "LAN", "WAN", "infra-red", or "Bluetooth", types of network access points, by which "the requested activity" (or "activity request"), being "access to a network", i.e., "LAN", "WAN", "infra-red", or "Bluetooth", types of networks, is performed or carried out, being well known to one of ordinary skill in the art, are not needed for properly describing and understanding implementation of the relevant aspects, embodiments, and examples, of the present invention, and are not needed for properly understanding the 'intended meaning' of the recitations of (original) claims 30-32 and 69-70.

Nevertheless, in view of the preceding discussion and clarification of the subject matter recited in (original) claims 30-32 and 69-70, by this Amendment, (original) claims 30-32 and 69-70, were amended for the objective of further providing said claims to

'particularly point out and distinctly claim the subject matter which the applicant regards as his invention', in full compliance with 35 U.S.C. §112, second paragraph.

Support for preceding amendments of claims 30-32 and 69-70 is literally and clearly found in the original specification of the disclosed invention, particularly, at least, in the hereinabove copied sections of text from the original specification.

Applicants believe the preceding discussion, clarifications, and current amendments of claims 30-32 and 69-70, completely overcome Examiner's Item 16, 35 U.S.C. §112, second paragraph, rejection of said claims.

Item 17:

The Examiner stated that "Claims 20 - 23 and 61 - 62 recite limitations completed by "therewith/thereby to authorize said activity request"". The Examiner provided further details regarding lack of clarity of said claims.

As a reference to Applicants' response to Examiner's Item 17, the Applicant points out that literal basis and 'intended meaning' of the recitations of (original) apparatus claims 20-23 and method claims 61-62 appear in several places throughout the original specification of the disclosed invention, particularly, in the 'Description of the Preferred Embodiments' section, from pages 10 to 24, inclusive, along with reference to Figs. 1 - 5.

In view of the preceding statement, as well as in view of hereinabove previously described amendments [in response to Examiner's Item 9] of apparatus independent claim 1 and method independent claim 46, by this Amendment, (original) claims 20 - 23 and 61 - 62 were amended for the objective of providing said claims to 'particularly point out and distinctly claim the subject matter which the applicant regards as his invention', in full compliance with 35 U.S.C., 112, second paragraph.

Among the above indicated amendments, (original) apparatus claim 20 and method claim 61 were amended to be consistent with, and correspond to, each other. Apparatus claim 23 and method claim 62 were similarly amended. Additionally, the phrase "therewith/thereby to authorize said activity request" appearing in each of (original) claims 20 - 23 and 61 - 62, does not appear in (currently amended) claims 20-23 and 61-62.

Support for preceding amendments of claims 20-23 and 61-62 is literally and clearly found in several places throughout the original specification of the disclosed invention, and is particularly found, at least, in the following exemplary copied sections of text from the 'Description of the Preferred Embodiments' section:

> For example, on p. 12, lines 18-22, wherein it is stated:

"As will be explained below, the authenticatable link leg of the communication may precede or follow the non-authenticatable leg, as long as the two legs can be successfully associated, and a non-exhaustive list of alternative procedures is described hereinbelow".

> Additionally, for example, on p. 16, lines 7 - 10, wherein it is stated:

"An alternative solution starts the authentication sequence from the Mobile Unit: The user sends an SMS to the communicator, which in turn responds to the mobile with a temporary password for the session".

> Additionally, for example, from p. 21, line 17, to p. 22, line 10, wherein it is stated:

"As discussed above, it is not crucial to the invention which of the two links is made first or whether they are made simultaneously". Each possibility provides a legitimate embodiment of the invention with attendant advantages and disadvantages.

In one version, communication starts with the non-authenticatable device. The system sends a message to the related authenticatable device requesting approval. The device user sends back his approval and either the authentication is completed at that point or the system sends a password to the authenticatable device. The user receives the password and enters or copies or otherwise transfers the password to the non-authenticatable device, thus to complete the authentication.

In another version, a communication request originates from the authenticatable device. The system sends a password or temporary username and password to the authenticatable device. The password, or username and password, is copied or transferred to the non-authenticatable device, and the non-authenticatable device relays the password etc. back to the system to establish the authentication".

The Applicant believes the preceding discussion, clarifications, and current amendments of claims 20 - 23 and 61 - 62, completely overcome Examiner's Item 17, 35 U.S.C. 112, second paragraph, rejection of said claims.

Item 18:

The Examiner stated that "Claims 37 and 74 use the term "said authorization". The term is not understood since previous claims refer only to authentication. In light of the specification the term is treated as authentication".

Applicants confirm Examiner's treatment of the term "said authorization".

In view of the preceding statement, and of hereinabove previously described amendments [in response to Examiner's Item 9] of apparatus independent claim 1 and method independent claim 46, and of hereinabove previously described amendments [in response to Examiner's Item 10c, regarding antecedent basis of the term "said authorization"] of apparatus claim 37 and method claim 74, the Applicant believes that (currently amended) claims 37 and 74 provide for said claims to 'particularly point out and distinctly claim the subject matter which the applicant regards as his invention', in full compliance with 35 U.S.C. §112, second paragraph.

Support for preceding amendments of claims 37 and 74 is ~~literally~~ and clearly found in several places throughout the original specification of the disclosed invention, and is particularly found, at least, in the following exemplary copied sections of text from the 'Description of the Preferred Embodiments' section:

> For example, with reference to Fig. 2, on p. 15, lines 4-8, wherein it is stated:

"A timer 23 [21 - refer to Applicant's response to Examiner's Item 5, hereinabove] is operated, giving the owner of the mobile telephone a fixed time to reply and confirm the identity of the user. Additionally or alternatively, a failure counter 24 counts unsuccessful attempts to establish the authentication, stopping the authentication operation when a predetermined threshold is reached".

> Additionally, for example, from p. 21, line 17, to p. 22, line 10, wherein it is stated:

"The portal begins to run a timer to timeout the authentication after a predetermined time limit".

Applicants believe the preceding discussion, clarifications, and current amendments of claims 37 and 74, completely overcome Examiner's Item 18, 35 U.S.C. §112, second paragraph, rejection of said claims.

Item 19:

The Examiner stated that "Claim 24 is convoluted". The Examiner provided further details regarding lack of clarity of said claim.

In view of hereinabove previously described amendments [in response to Examiner's Item 9] of apparatus independent claim 1 and method independent claim 46, and in view of hereinabove previously described amendment [in response to Examiner's Item 17] of apparatus claim 23, by this Amendment, (original) apparatus claim 24 was amended for the objective of providing said claim to 'particularly point out and distinctly

claim the subject matter which the applicant regards as his invention', in full compliance with 35 U.S.C. §112, second paragraph.

Support for preceding amendment of apparatus claim 24 is literally and clearly found in several places throughout the original specification of the disclosed invention, and is particularly found, at least, in the following exemplary copied sections of text from the specification:

> For example, in the 'Summary of the Invention' section, on p. 7, lines 5-8, wherein it is stated:

"Alternatively [*Alternatively - refer to Applicant's separate amendment of the specification immediately following Applicant's response to Examiner's Item 6, hereinabove*], the authenticatable device may send the initial message to the communicator authorizing said activity, before or after the non-authenticatable device attempts to access the service. **The reply may then contain an identifier to be used by the non-authenticatable (non-authenticated) device**".

> Additionally, for example, in the 'Description of the Preferred Embodiments' section, on p. 16, lines 12 - 14, wherein it is stated:

"Alternatively, **the communicator provides a temporary identifier and password pair, to ensure user anonymity and the user enters this temporary identifier and password pair**".

Applicants believe the preceding discussion, clarifications, and current amendment of claim 24, completely overcome Examiner's Item 19, 35 U.S.C. §112, second paragraph, rejection of said claim.

Item 20:

The Examiner stated that "Claim 63 is unclear". The Examiner provided further details regarding lack of clarity of said claim.

Applicants respectfully point out method claim 63 'similarly' corresponds to apparatus claim 24, in that the subject matter recited in claim 24 focuses on insertion or provision of "an identifier with said reply" (by the communicator of claim 23), while in a similarly corresponding way, the subject matter recited in claim 63 focuses on insertion or provision of "a password in said reply" (by the communicator of claim 62),

In view of hereinabove previously described amendments [in response to Examiner's Item 9] of apparatus independent claim 1 and method independent claim 46, and of hereinabove previously described amendment [in response to Examiner's Item 10d, regarding antecedent basis of the term "said reply"] of method claim 63, and in view of

hereinabove previously described amendment [in response to Examiner's Item 17] of method claim 62, the Applicant believes that (currently amended) claim 63 provides for said claim to 'particularly point out and distinctly claim the subject matter which the applicant regards as his invention', in full compliance with 35 U.S.C. §112, second paragraph.

Support for preceding amendments of method claim 63 is literally and clearly found in several places throughout the original specification of the disclosed invention, and is particularly found, at least, in the following exemplary copied sections of text from the specification:

> For example, in the 'Summary of the Invention' section, on p. 4, lines 8-10, wherein it is stated:

"Preferably, the communicator comprises functionality to insert a password into said reply for a requesting party to enter via said non-authenticatable (non-authenticated) device, . . ."

> Additionally, for example, in the 'Summary of the Invention' section, on p. 7, lines 13 - 16, wherein it is stated:

"The method preferably comprises inserting a password into said reply for a requesting party to enter via said non-authenticatable (non-authenticated) device, and determining whether said password has been received via said non-authenticatable (non-authenticated) device".

> Additionally, for example, in the 'Description of the Preferred Embodiments' section, from p. 21, line 21, to p. 22, line 10, wherein it is stated:

"In one version, communication starts with the non-authenticatable device. The system sends a message to the related authenticatable device requesting approval. The device user sends back his approval and either the authentication is completed at that point or the system sends a password to the authenticatable device. The user receives the password and enters or copies or otherwise transfers the password to the non-authenticatable (non-authenticated) device, thus to complete the authentication".

"In another version, a communication request originates from the authenticatable device. The system sends a password or temporary username and password to the authenticatable device. The password, or username and password, is copied or transferred to the non-authenticatable (non-authenticated) device, and the non-authenticatable (non-authenticated)

device relays the password etc. back to the system to establish the authentication".

Applicants believe the preceding discussion, clarifications, and current amendment of claim 63, completely overcome Examiner's Item 20, 35 U.S.C. §112, second paragraph, rejection of said claim.

Item 21:

The Examiner stated that "Claims 42 and 79 refer to an indication that the activity request is approved and recite that the indication is output by applying a change to a routing table on a router. However, the specification does not teach how communication of the authentication is achieved by changing a routing table". The Examiner provided further details regarding lack of clarity of said claims.

In view of hereinabove previously described amendments [in response to Examiner's Item 9] of apparatus independent claim 1 and method independent claim 46, and in view of hereinabove previous clarification [in response to Examiner's Items 7 - 8, regarding rejection of claims 42 and 79 under 35 U.S.C. §112, first paragraph] of the subject matter recited in (original) claims 42 and 79, along with previously described amendments [also in response to Examiner's Items 7 - 8] of apparatus claim 42 and method claim 79, the Applicant believes that (currently amended) claims 42 and 79 provide for said claims to 'particularly point out and distinctly claim the subject matter which the applicant regards as his invention', in full compliance with 35 U.S.C. §112, second paragraph.

Applicants believe the preceding comments, and current amendments of claims 42 and 79, completely overcome Examiner's Item 21, 35 U.S.C. §112, second paragraph, rejection of said claims.

Item 22:

The Examiner stated that "The use of trademarks has been noted in this application (e.g., *Bluetooth* in claims 36 and 73)". The Examiner provided further details regarding lack of clarity of said claims which include a trademark/trade name.

Applicants respectfully submit that above indicated trademark/trade name, i.e., "Bluetooth", representing a particular type of wireless network, i.e., a wireless personal area network, for indicating a specific type of 'wireless network device' as embodied and exemplified by the present invention, and appearing in the indicated claims, is well known to one of ordinary skill in the art.

Moreover, Applicants firmly contend that descriptive details of the above indicated "Bluetooth device", representing a particular type of wireless network device, i.e., a 'wireless personal area network' device, being well known to one of ordinary skill in the art, are not needed in the specification for properly describing and understanding implementation of the relevant aspects, embodiments, and examples, of the present invention.

In view of the preceding discussion and clarification of the subject matter, regarding the trademark/trade name "Bluetooth" recited in (original) claims 36 and 73, by this Amendment, (original) claims 36 and 73, each including the trademark/trade name "Bluetooth", were amended by adding the spelled out full 'generic technical name', i.e., 'wireless personal area network', associated with the trademark/trade name "Bluetooth", in parentheses immediately following the trademark/trade name "Bluetooth", for the objective of providing said claims to 'particularly point out and distinctly claim the subject matter which the applicant regards as his invention', in full compliance with 35 U.S.C. §112, second paragraph.

In particular, apparatus claim 36 and corresponding method claim 73 were each amended by adding the spelled out full 'generic technical name' associated with the trademark/trade name "Bluetooth", being a "wireless personal area network", in parentheses immediately following the trademark/trade name "Bluetooth".

Applicants believe the preceding discussion and clarification, and current amendments of claims 36 and 73, completely overcome Examiner's Item 22, 35 U.S.C. §112, second paragraph, rejection of said claims.

Relatedly, apparatus claim 31 and corresponding method claim 70 were each similarly amended [in addition to hereinabove previously described amendments to said claims, in response to Examiner's Item 16] by adding the spelled out full 'generic technical name' associated with the trademark/trade name "Bluetooth", being a "wireless personal area network", in parentheses immediately following the trademark/trade name "Bluetooth".

Applicants respectfully request allowance of the preceding amendment of claims 31 and 70.

Item 23:

The Examiner stated that "Claims 12-15, 17, 25-29, 33-36, 38-41, 48-53, 55-60, 64-68, 71, 73, 75, and 79, are rejected by virtue of their dependence." [upon claims rejected by Examiner Item 9, in general, and Examiner Items 10-22, in particular]

The Examiner further stated that "Appropriate correction is required".

By this Amendment, as fully described and shown hereinabove, Applicants have amended apparatus independent claim 1, and claims 2-13, 15, 16, 18-38, and 40-42, depending therefrom, and has amended method independent claim 46, and claims 47 - 58, 60 - 75, and 77 - 79, depending therefrom. Apparatus dependent claims 14 and 17, and method dependent claim 59, remain in (original) form. Apparatus dependent claim 39 and method dependent claim 76 have been cancelled.

Thus, based on the preceding comments, and claims amendments, Applicants respectfully submit that (currently amended) apparatus independent claim 1, and (currently amended) claims 2-38, and 40-42, depending therefrom, and, (currently amended) method independent claim 46, and (currently amended) claims 47-75, and 77-79, depending therefrom, 'particularly point out and distinctly claim the subject matter which the applicant regards as his invention', in full compliance with 35 U.S.C. §112, second paragraph.

Accordingly, based on the preceding comments, and claims amendments, claims 12-15, 17, 25-29, 33-36, 38, 40, 41, 48-53, 55-60, 64-68, 71, 73, 75, and 79, which Examiner rejected by virtue of their dependence, by now being in their currently amended forms, or/and by depending upon one or more claims in their currently amended forms, 'particularly point out and distinctly claim the subject matter which the applicant regards as his invention', in full compliance with 35 U.S.C. §112, second paragraph.

Applicants believe the preceding comments, in view of the hereinabove described and shown current amendments of the indicated claims, completely overcome Examiner's Item 23, 35 U.S.C. §112, second paragraph, rejection of said claims.

Items 24 - 27:

The Examiner stated that "claims 1-3, 10-15, 17, 25-27, 29, 33, 35-36, 39-42, 46-48, 55-56, 58-60, 64-66, 68, 71, 73, and 76-78, were rejected under 35 U.S.C. §102(e) as being anticipated by Boyle et al. (U.S. Patent No. 6,138,158)".

In Examiner Items 25-27, the Examiner provided details of rejection of specific claims, regarding Examiner Item 24, as relating to above indicated rejection of the claims on grounds of 35 U.S.C. §102(e).

Applicants respectfully traverse above Examiner's 35 U.S.C. §102(e) rejection of the (original) claims of the specification.

Following hereinbelow, Applicants provide detailed discussion, arguments, comments, and literal support, along with reference to the (original) claims, as well as to

the hereinabove described and provided (currently amended) claims, of the specification, for the objective of clearly showing that the (original) claims, and even more so, the (currently amended) claims, of the specification are not anticipated by Boyle et al. (U.S. Patent No. 6,138,158) on grounds of 35 U.S.C. §102(e).

In Boyle et al., as stated in the 'Field of Invention' sub-section, col. 1, lines 6-11, the invention disclosed therein ". . . relates generally to data communications, and in particular relates to a method and apparatus for integrating narrowband and wideband data transports to optimize the use of the wideband channel through the effective use of the narrowband channel". Moreover, the main motivation for the invention disclosed therein is clearly understood from the 'Description of the Related Art' sub-section, col. 1, lines 49 - 66, wherein it is stated: "Alternatively, the traveler or the trader may be preferably informed of any available immediate flight information or a stock price that has hit a pre-set preferred price. It is, however, sometimes disturbing to inform the traveler or the trader of any updated changes to the flight information or the current stock price, especially the stock price being updated every second during trading hours. **There is, therefore, a great need for a solution for informing users of any updates to their desired information and allowing the users to retrieve the updated information when needed.** Further, in a circuit-switched network, such as GSM, a mobile device must establish a circuit in a carrier infrastructure via a wideband channel before communicating with any server on the network. The connection, similar to a telephone line, can be both time consuming and costly to the users. Hence users generally prefer to have controls over the communication of their mobile devices through the carrier infrastructure when accessing updated information from a web server".

A brief summary of the invention disclosed by Boyle et al. is provided in the Abstract, wherein it is stated: "The present invention has particular applications to the navigation of Internet web pages using two-way interactive communication devices, such as a mobile device, a mobile phone, a landline telephone, and an Internet capable remote controller. According to one aspect of the present invention, each of the two-way interactive communication devices is a node in a distributed network, thus the devices can access hypermedia or hierarchic layers of information stored in server devices on the network. When one or more pages of information are updated, rather than sending the entire updated information to users of the devices subscribing to the updated information through the network, the present invention sends a notification to a proxy server that forwards the notification to the users using a messaging system via a low cost narrowband

channel. Upon receiving the notification, the users can fetch the updates, when needed, through a wideband channel. Hence systemic solutions are provided in the present invention to integrate wideband and narrowband channels so as to keep the users informed of any updates to their desired information and meanwhile provide efficient means to the users for retrieving the latest updates without incurring uncontrollable costs and increasing unnecessary network traffics".

Additionally, in Boyle et al., as stated in col. 2, lines 28 - 55, "According to another aspect of the present invention, the client devices communicate with the server devices through a link infrastructure. The link infrastructure, providing an interface between the Internet and the airnet, comprises a link device and a carrier infrastructure. The link device comprises a messenger and a pull engine while the carrier infrastructure comprises a message system (MS), such as a short message service center (SMSC), and an interworking function (IWF). When a notification is sent out from one of the server devices that holds an updated information subscribed by one of the client devices serviced by the link infrastructure, the notification is processed in the messenger to form a corresponding message transportable through MS and possibly IWF depending on whether a communication session has been established. More specifically, the messenger including the notification is coupled directly to MS that is responsible for sending the corresponding message through a narrowband channel to the targeted client device. Upon receiving the corresponding message, the targeted client device is caused to send a request to establish a communication session with the pull engine in the link infrastructure through the wideband channel so as to fetch the updated information from the server that holds the updated information. When the client device is authenticated by the link device, the communication session is established and the updated information is fetched into the link device that further forwards the fetched information to the client device".

It is critically important to point out and emphasize that the invention disclosed by Boyle et al. involves transferring, for example, updated web pages through a wireless network to one or more users **each of which uses or operates with a single and same "client device"**, such as an authenticable mobile device, for example a cellular phone. Transferring the update by the wireless network, via the web server, to the client device of each user is accomplished in two necessarily sequential steps.

According to the first step, a message, such as an SMS, is sent over a narrowband channel to the authenticatable client device of the user. The message informs the user that an update is available from the web server at a given address. As stated in Boyle et al.,

"More specifically, the messenger including the notification is coupled directly to MS that is responsible for sending the corresponding message through a narrowband channel to the targeted client device".

According to the second step, the user, using the 'same' authenticatable client device that received the message indicating an available update, sends a request to the web server to receive the updated pages over a wideband channel. As stated in Boyle et al., "Upon receiving the corresponding message, the (same) targeted client device is caused to send a request to establish a communication session with the pull engine in the link infrastructure through the wideband channel so as to fetch the updated information from the server that holds the updated information. When the (same) client device is authenticated by the link device, the communication session is established and the updated information is fetched into the link device that further forwards the fetched information to the (same) client device".

Thus, in the invention disclosed by Boyle et al., all two-way communication is carried out by a user using or operating with a 'single and same' 'client device', such as an authenticatable mobile device, for example a cellular phone. The invention disclosed by Boyle et al. involves no separately connected or operative "non-authenticatable device".

By strong contrast, however, Applicants respectfully point out to the Examiner that, literally consistent and in accordance with the title of the present invention, the present invention is directed to an apparatus and method of "Authentication For Remote Connections". Moreover, in the Applicants' specification, in the 'Field of the Invention' section, on p. 1, lines 13 - 17, it is clearly stated "The present invention relates to authentication for remote connections, for example for authenticating remote transactions or for ensuring that the correct user is billed for remotely provided services, and more particularly but not exclusively to providing authentication to users connecting over channels which are not secure or over which a user cannot be positively identified".

According to the recitations of (original) apparatus independent claim 1 and method independent claim 46, configuration and function (operation) of two distinguishably different types or modes of devices, i.e., "an authenticatable mobile device" and a "non-authenticatable device", are involved, and are 'required', during implementation of the claimed invention. Moreover, the originally claimed apparatus also includes the component of "an associator for associating the verification with an activity request via a non-authenticatable device", as recited in (original) apparatus independent claim 1, and the originally claimed method also includes the step or procedure of "associating the

verification with an activity request via a non-authenticatable device", as recited in (original) method independent claim 46.

Regarding Examiner's Item 26, the Applicant strongly contends that Examiner's indicated teaching by Boyle et al. about 'associating', in particular, therein in col. 8, lines 33 - 51, wherein it is stated: "The device ID 316 is further associated with a subscriber ID 318 authorized by a carrier in server device 114 as part of the procedures to activate a subscriber account 320 for mobile device 302", is clearly not the same as, and does not anticipate, above stated recitation of the "associator", in combination with the other recited components, in (original) apparatus independent claim 1, and is clearly not the same as, and does not anticipate, above stated recitation of "associating", in combination with the other recited steps or procedures, in (original) method independent claim 46, of the Applicant's invention. In the invention disclosed by Boyle et al., there is no involvement, and no requirement, of "an associator for associating a verification (or authentication) [provided by "a communicator communicating with an authenticatable mobile device"] with an activity request via a non-authenticatable device", as the case clearly is in the Applicant's originally claimed invention.

Applicants believe the preceding arguments, comments, and literal support, along with reference to (original) claims 1 and 46 of the specification, are quite sufficient for completely overcoming Examiner's Items 24 - 26, 35 U.S.C. §102(e), rejections of (original) apparatus independent claim 1, and of (original) method independent claim 46.

Since (original) claims 2-3, 10-12, 13-15, 17, 25-27, 29, 33, 36, 40-42, 47-48, 56-57, 58-60, 64-66, 68, 71, 73, and 77-78, depend from (original) independent claims 1 and 46, then, similarly, the preceding arguments, comments, and literal support, are quite sufficient for completely overcoming Examiner's Item 27, 35 U.S.C. §102(e), rejection of said dependent claims.

In view of hereinabove previously described amendments [in response to Examiner's Item 9] of apparatus independent claim 1 and method independent claim 46, and in view of the immediately preceding arguments, comments, and literal support, along with reference to (currently amended) claims 1 and 46 of the specification, the Applicant even more firmly believes and contends that recitations of (currently amended) claims 1 and 46 are not anticipated by the teachings of Boyle et al., and therefore, even further completely overcome Examiner's Items 24 - 26, 35 U.S.C. §102(e), rejections of (original) apparatus independent claim 1, and of (original) method independent claim 46.

Accordingly, since claims 2-3, 10-12, 13-15, 17, 25-27, 29, 33, 36, 40-42, 47-48, 56-57, 58-60, 64-66, 68, 71, 73, and 77-78, depend from (currently amended) claims 1 and 46, then, similarly, the preceding arguments, comments, and literal support, even further completely overcome Examiner's Item 27, 35 U.S.C. §102(e), rejection of said dependent claims.

Applicants believe the preceding arguments, comments, and literal support, along with reference to the (original) claims, as well as to the hereinabove described and provided (currently amended) claims, of the specification, completely overcome Examiner's Items 24 - 27, 35 U.S.C. §102(e), rejections of said claims.

Items 28 - 38:

The Examiner stated that "claims 4-9, 16, 18-24, 28, 30-32, 34, 38, 49-55, 61-63, 67, 69-70, 72, 75, and 79, were rejected under 35 U.S.C. §103(a) as being unpatentable over Boyle et al. (U.S. Patent No. 6,138,158)".

In Examiner Items 29 - 38, the Examiner provided details of rejection of specific claims, regarding Examiner Item 28, as relating to above indicated rejection of the claims on grounds of 35 U.S.C. §103(a).

In addition to the hereinabove preceding discussion in the context of completely overcoming the 35 U.S.C. §102(e) claims rejections, the Applicant submits that recitations of apparatus independent claim 1 and method independent claim 46, in their (original) or (currently amended) forms, are not obvious from the teachings of Boyle et al., and therefore, are patentable over Boyle et al.. Thus, Applicants submit that claims 4-9, 16, 18-24, 28, 30-32, 34, 38, 49-55, 61-63, 67, 69-70, 72, 75, and 79, depending therefrom, are patentable over Boyle et al..

Applicant believe the preceding comments, along with reference to the (original) claims, as well as to the hereinabove described and provided (currently amended) claims, of the specification, completely overcome Examiner's Items 28 - 38, 35 U.S.C. §103(a), rejections of said dependent claims.

Items 39 - 40:

The Examiner stated that claims 37 and 74 were rejected under 35 U.S.C. §103(a) as being unpatentable over Boyle et al. (U.S. Patent No. 6,138,158) in view of Huang (U.S. Patent No. 6,192,361).

In Examiner Item 40, the Examiner provided additional details of rejection of claims 37 and 74, regarding Examiner Item 39, on grounds of 35 U.S.C. §103(a).

In addition to the hereinabove preceding discussion in the context of completely overcoming the 35 U.S.C. 102(e) claims rejections, and in view of the Applicants' contention that recitations of apparatus independent claim 1 and method independent claim 46, in their (original) or (currently amended) forms, are not obvious from the teachings of Boyle et al., and therefore, are patentable over Boyle et al., then, Applicant contend that claims 4-9, 16, 18-24, 28, 30-32, 34, 38, 49-55, 61-63, 67, 69-70, 72, 75, and 79, depending therefrom, are patentable over Boyle et al..

Applicants believe the preceding comments, along with reference to the (original) claims, as well as to the hereinabove described and provided (currently amended) claims, completely overcome Examiner's Items 39 - 40, 35 U.S.C. §103(a), rejections of said dependent claims.

By this Amendment, as fully described and shown hereinabove, Applicants respectfully submit that apparatus independent claim 1, and claims 2-38, and 40-42, depending therefrom, and, method independent claim 46, and claims 47-75, and 77-79, depending therefrom, are now in condition for allowance, and such action is respectfully requested.

Additionally, Applicants respectfully submit that said claims are allowable over the cited prior art.

Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,



Martin Moynihan
Registration No. 40,338

Date: November 29, 2005

Encl.:

1. New Set of Formal Drawings (4 sheets)
2. Letter to Chief Draftsman
3. Three-Month Extension Fee



Serial No.: 09/990,875

Inventor : KATZ Eyal et al

ANNOTATED MARKED-UP SHEET

Sheet: 1 of 2

Title: Authentication For Remote Connections

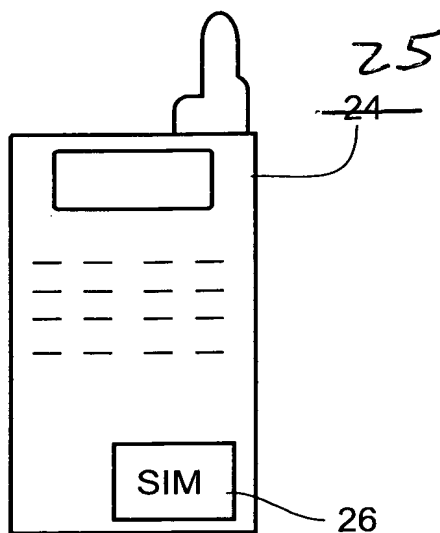


Fig. 2

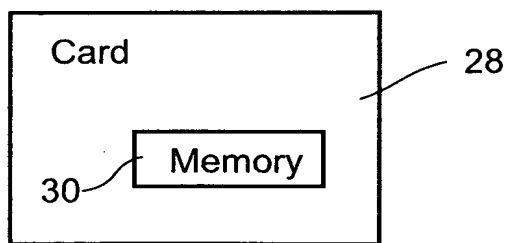


Fig. 3

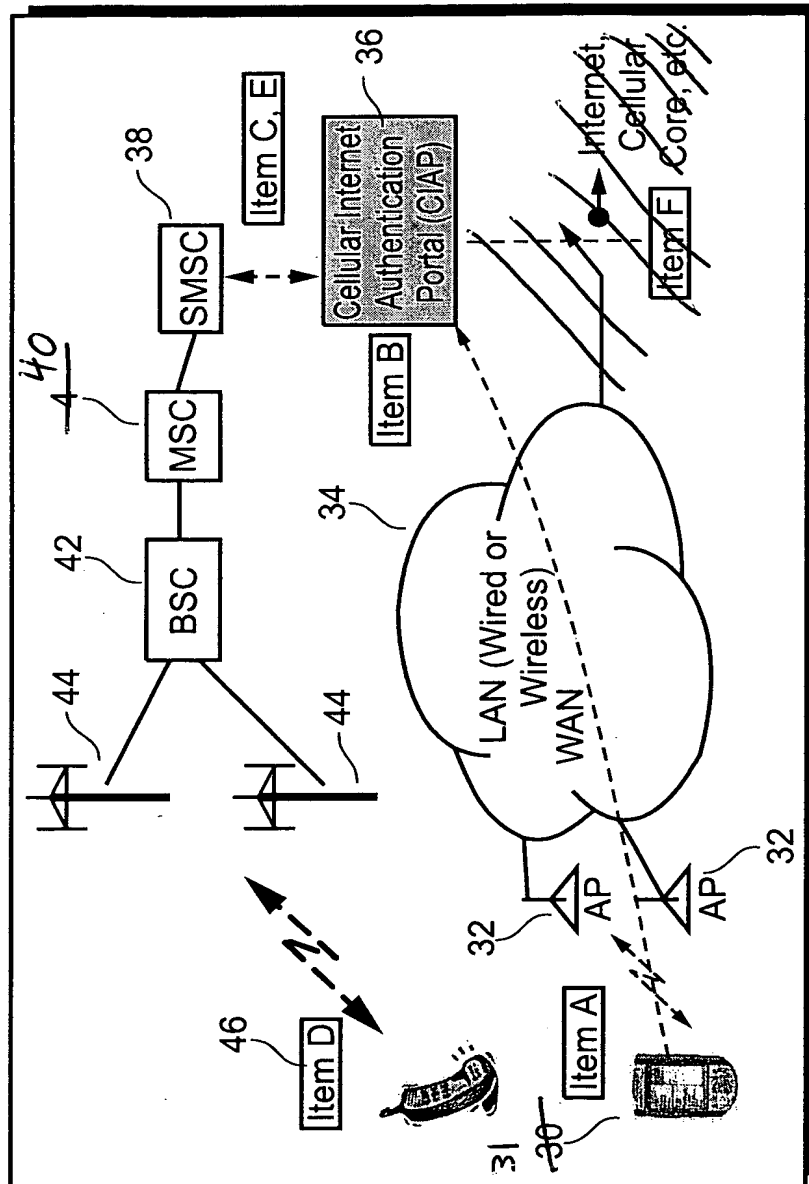


Fig. 4